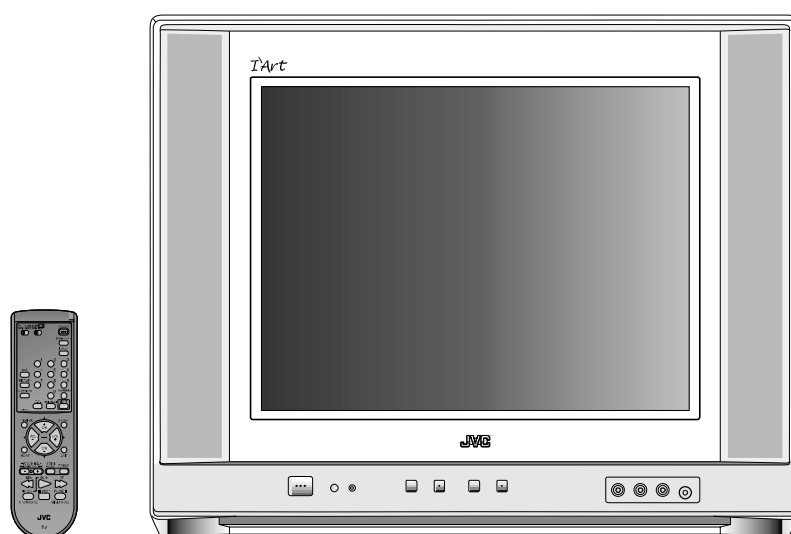


JVC

SERVICE MANUAL

COLOR TELEVISION

AV-14F703



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SPECIFICATIONS

TELEVISION

Picture Tube:	14" (measured diagonally)
Color System:	NTSC
TV RF System:	CCIR (M)
Tuner Type:	181 Channel, Quartz PLL Frequency Synthesized
Receiving Channels:	VHF 2-13 UHF 14-69 CATV 01-97 (5A)-(A-3) 98-99 (A-2)-(A-1) 14-22 (A)-(I) 23-36 (J)-(W) 37-65 (AA)-(FFF) 66-125 (GGG)-(125)
Intermediate Frequency:	Picture (FP) : 45.75 MHz Sound (FS) : 41.25 MHz FP-FS : 4.50 MHz
Antenna Input:	VHF/UHF In 75 ohms coaxial, F-Type Connector
Speaker:	1-5/8" (4 cm) x 2-13/16" (7 cm), 8 ohms x 2
Audio Output Power:	2.5 W + 2.5 W

GENERAL

Power Source:	120 V AC, 60 Hz
Power Consumption:	80 Watts
Dimensions(W x H x D):	17-1/8" (432 mm) x 13-5/8" (344.5 mm) x 15-1/2" (393.5 mm)
Weight:	26.4 lbs/12 kg
Video/Audio Inputs:	Component input Y input: 1.0 Vp-p, 75 ohm (RCA pin jack) Pb, Pr input : 0.7 Vp-p, 75 ohm (RCA pin jack) S-Video input Y input: 1.0 Vp-p, 75 ohm C input: 0.3 Vp-p, 75 ohm Video input: 1.0 Vp-p, 75 ohm (RCA pin jack) Audio input: -8dB, 47 kohm (RCA pin jack)
Headphone Jack:	3.5 mm mini-jack
Storage Temperature	-20 °C ~ 60 °C
Operating Temperature	5 °C ~ 40 °C

Accessories:

Remote Control X 1
Batteries (UM-3) X 2

Design & specification are subject to change without notice.

SAFETY PRECAUTIONS

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES


As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.

Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a  mark, the designated parts must be used.

4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

6. AVOID AN X-RAY

Safety is secured against an X-ray by considering about the cathode-ray tube and the high voltage peripheral circuit, etc. Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit. Repairing except indicates causes rising of high voltage, and it emits an X-ray from the cathode-ray tube.

7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the external exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal
Earphone jack

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER

The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.

2. PART NO. and DESCRIPTION

You can find it in your SERVICE MANUAL.

IMPORTANT

Inferior silicon grease can damage IC's and transistors.

When replacing an IC's or transistors, use only specified silicon grease (YG6260M).

Remove all old silicon before applying new silicon.



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SPECIFIC SERVICE INSTRUCTIONS

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

- * After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
- * Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

REMOVAL

1. Follow the steps as follows to discharge the Anode Cap. (Refer to Fig. 1-1.)

Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground. While holding the plastic part of the insulated Screwdriver, touch the support of the Anode with the tip of the Screwdriver. A cracking noise will be heard as the voltage is discharged.

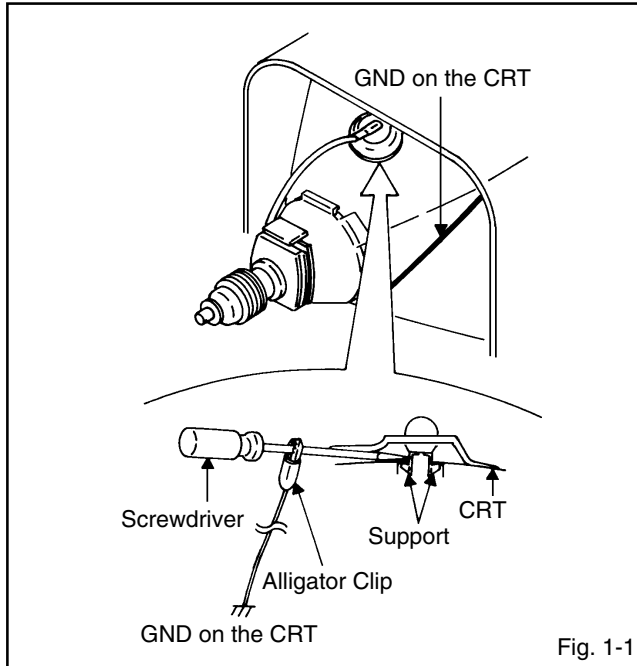


Fig. 1-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support. (Refer to Fig. 1-2.)

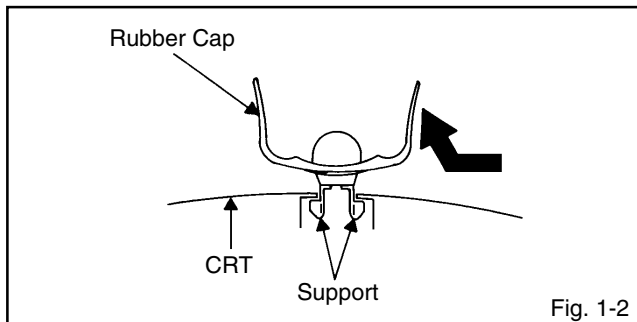


Fig. 1-2

3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

1. Clean the spot where the cap was located with a small amount of alcohol. (Refer to Fig. 1-3.)

NOTE

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

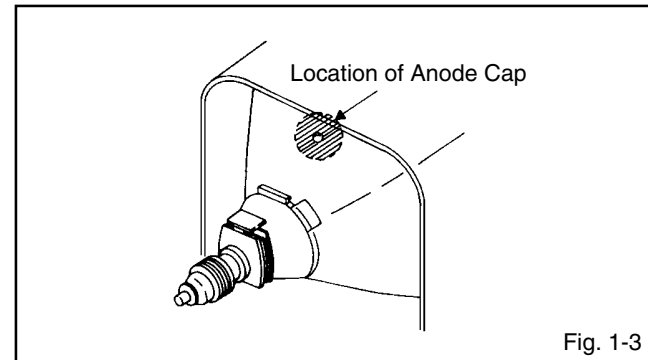


Fig. 1-3

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. (Refer to Fig. 1-4.)

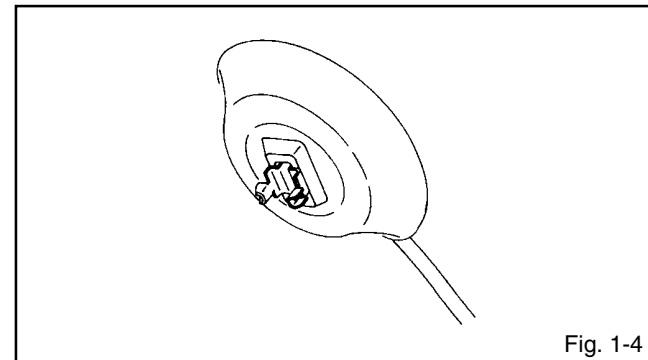


Fig. 1-4

4. Insert one end of the Anode Support into the anode button, then the other as shown in Fig. 1-5.

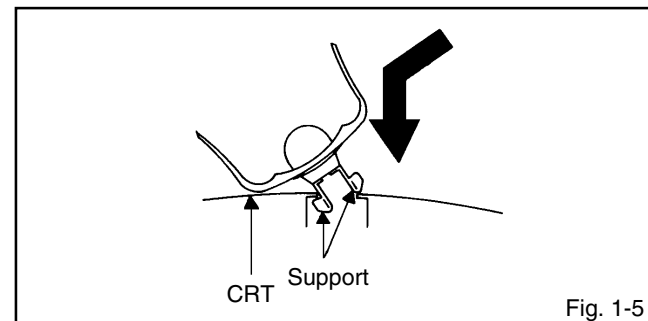


Fig. 1-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

DISASSEMBLY INSTRUCTIONS

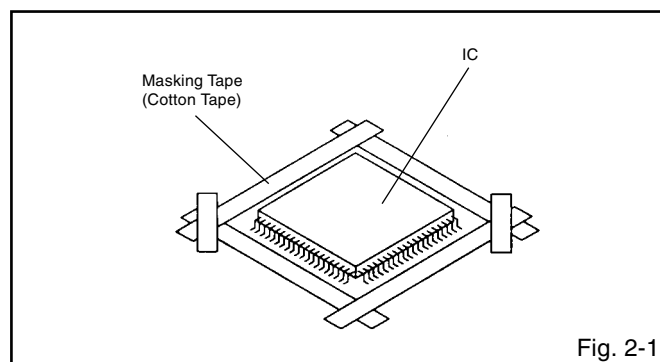
2. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put the Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. (Refer to Fig. 2-1.)

NOTE

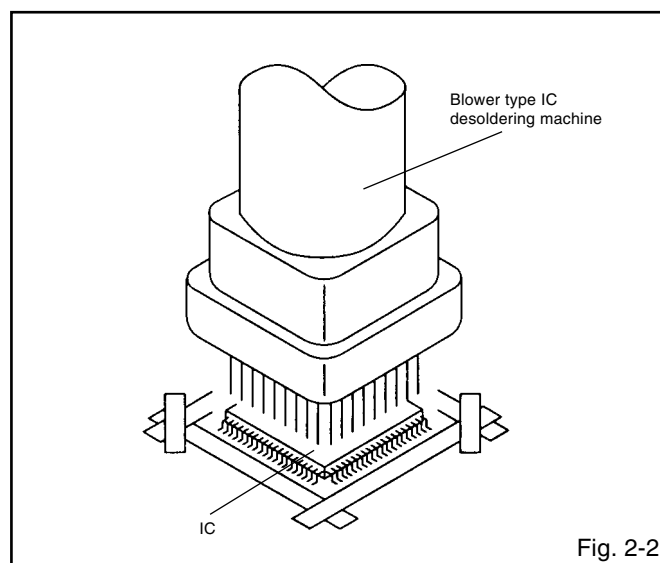
Masking is carried out on all the parts located within 10 mm distance from IC leads.



2. Heat the IC leads using a blower type IC desoldering machine. (Refer to Fig. 2-2.)

NOTE

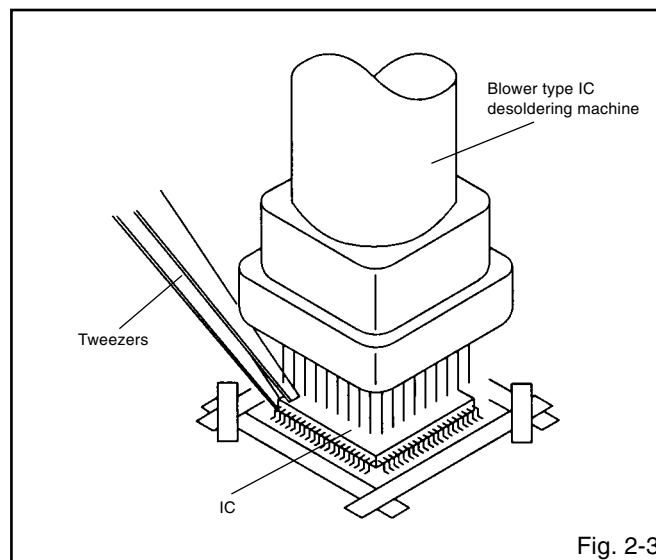
Do not add the rotating and the back and forth directions force on the IC, until IC can move back and forth easily after desoldering the IC leads completely.



3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. (Refer to Fig. 2-3.)

NOTE

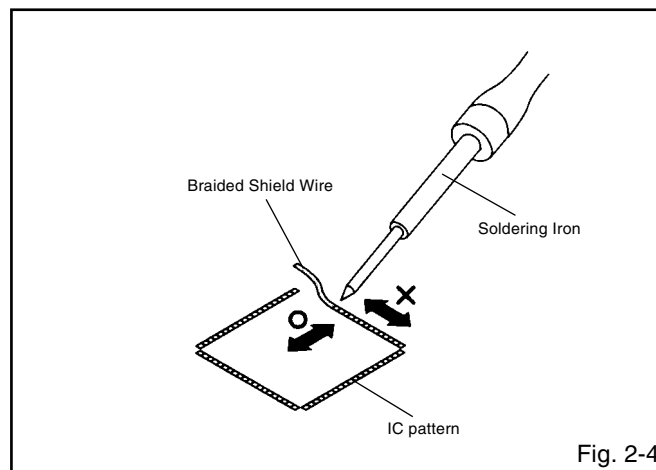
Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.



4. Peel off the Masking Tape.
5. Absorb the solder left on the pattern using the Braided Shield Wire. (Refer to Fig. 2-4.)

NOTE

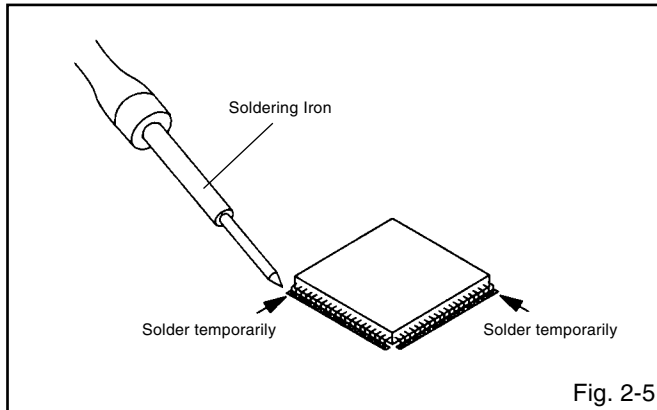
Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.



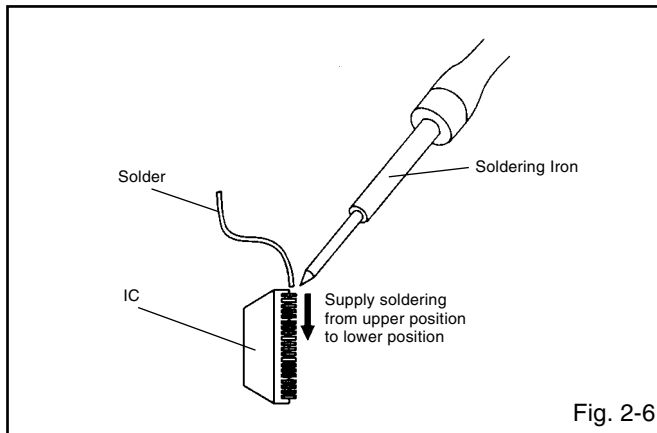
DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 2-5.)**



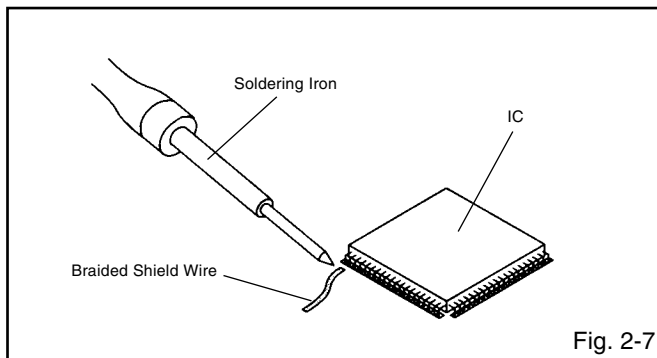
2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 2-6.)**



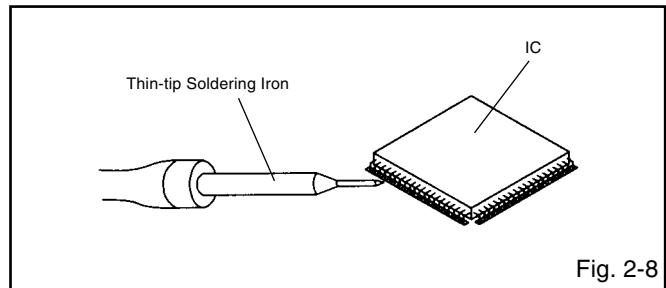
3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 2-7.)**

NOTE

Do not absorb the solder to excess.



4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 2-8.)**



5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass. Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

NOTE

When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, be always sure to replace the IC in this case.

SERVICE MODE LIST

This unit provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter the Service Mode, press both set key and remote control key for more than 1 second.

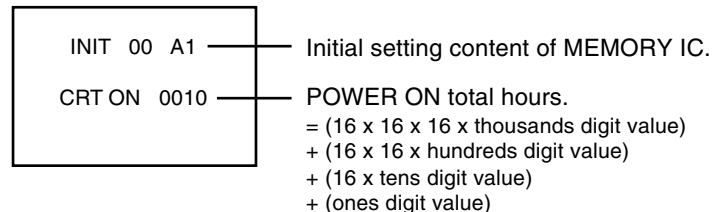
Set Key	Remocon Key	Operations
VOL. (-) MIN	0	Releasing of V-CHIP PASSWORD.
VOL. (-) MIN	1	Initialization of the factory. NOTE: Do not use this for the normal servicing. If you set a factory initialization, the memories are reset such as the channel setting, and the POWER ON total hours.
VOL. (-) MIN	3	Remocon code selection. NOTE: If you perform the remocon code selection, the remocon cannot be used. So, do not select the remocon code for the normal servicing.
VOL. (-) MIN	6	POWER ON total hours is displayed on the screen. Refer to the "CONFIRMATION OF HOURS USED". Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VOL. (-) MIN	8	Writing of EEPROM initial data. NOTE: Do not use this for the normal servicing.
VOL. (-) MIN	9	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).

CONFIRMATION OF HOURS USED

POWER ON total hours can be checked on the screen.
Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

1. Set the VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 1 second.
3. After the confirmation of using hours, turn off the power.



WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1.

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	A9	C3	02	00	31	B3	AF	37	9F	0A	44	04	00	00	00	56
10	4C	00	00	00	00	00	00	00	00	00	00	00	0F	07	41	41
20	61	62	63	64	66	68	29	69	6A	6B	6C	6D	6E	6F	50	70
30	51	71	52	72	53	73	73	54	54	74	74	55	55	75	75	56
40	56	76	76	57	57	77	77	58	58	78	78	59	59	79	79	5A
50	5A	7A	7A	5B	5B	7B	7B	5C	5C	7C	7C	7C	5D	5D	5D	5D

Table 1

1. Enter DATA SET mode by setting VOLUME to minimum.
2. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 1 second. ADDRESS and DATA should appear as FIG 1.

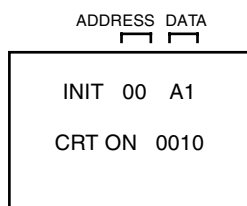


Fig. 1

3. ADDRESS is now selected and should "blink". Using the VOL. UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
4. Press ENTER to select DATA. When DATA is selected, it will "blink".
5. Again, step through the DATA using VOL. UP/DOWN button until required DATA value has been selected.
6. Pressing ENTER will take you back to ADDRESS for further selection if necessary.
7. Repeat steps 3 to 6 until all data has been checked.
8. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input. The unit will now have the correct DATA for the new MEMORY IC.

SERVICE ADJUSTMENTS

ELECTRICAL ADJUSTMENTS

1. ADJUSTMENT PROCEDURE

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor for a heat sink, apply the silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor.)

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Multi-Sound Signal Generator
4. Pattern Generator

On-Screen Display Adjustment

1. In the condition of NO indication on the screen.
Press the VOL. DOWN button on the set and the Channel button (9) on the remote control for more than 1 second to appear the adjustment mode on the screen as shown in Fig. 1-1.

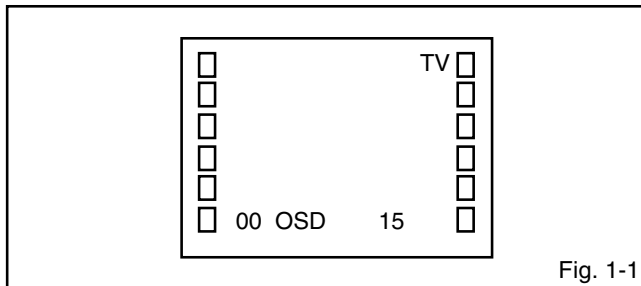


Fig. 1-1

3. Use the Channel UP/DOWN button or Channel button (0-9) on the remote control to select the options shown in Fig. 1-2.
4. Press the MENU button on the remote control to end the adjustments.

NO.	FUNCTION	NO.	FUNCTION	NO.	FUNCTION
00	OSD H	14	G.BIAS	28	RGB CONTRAST
01	CUT OFF	15	B.BIAS	29	PARABOLA
02	RF.AGC	16	BRI.CENT	30	TRAPEZIU
03	---	17	SUB CONT	31	COR TOP
04	H.POSI	18	CONT.MAX	32	COR BTM
05	V.POSI	19	CONT.CENT	33	V EHT
06	H.SIZE	20	CONT.MIN	34	H EHT
07	V.SIZE	21	BRI.MAX	35	FM.LVL
08	V.CENT	22	BRI.MIN	36	LEVEL
09	V.LIN	23	COL.MAX	37	SEP 1
10	VS CORR	24	COL.CENT	38	SEP 2
11	G.DRV	25	COL.MIN	39	T.STE
12	B.DRV	26	TINT	40	X-RAY
13	R.BIAS	27	SHARPNESS	88	READ DATA

Fig. 1-2

2. BASIC ADJUSTMENTS

2-1: CONSTANT VOLTAGE

1. Set condition is AV MODE without signal.
2. Connect the digital voltmeter to the **TP002**.
3. Adjust the **VR502** until the DC voltage is $115 \pm 1V$.

2-2: RF AGC

1. Place the set with Aging Test for more than 15 minutes.
2. Receive the VHF HIGH (63dB).
3. Connect the digital voltmeter between the **pin 5 of CP101** and the **pin 1 (GND) of CP101**.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (02) on the remote control to select "RF AGC".
5. Press the VOL. UP/DOWN button on the remote control until the digital voltmeter is $2.4 \pm 0.05V$.

2-3: CUT OFF

1. Adjust the unit to the following settings.
G. DRIVE=64, B. DRIVE=64, R. BIAS=32, G. BIAS=32, B. BIAS=32
2. Place the set with Aging Test for more than 15 minutes.
3. Activate the adjustment mode display of **Fig. 1-1** and
4. press the channel button (01) on the remote control to select "CUT OFF".
5. Adjust the **Screen Volume** until a dim raster is obtained.

2-4: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set with Aging Test for more than 10 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button (13) on the remote control to select "R. BIAS".
5. Press the CH. UP/DOWN button on the remote control to select the "R. BIAS", "G. BIAS", "B. BIAS", "B. DRIVE" or "G. DRIVE".
6. Adjust the VOL. UP/DOWN button on the remote control to whiten the R. BIAS, G. BIAS, B. BIAS, B. DRIVE, and G. DRIVE at each step tone sections equally.
7. Perform the above adjustments 5 and 6 until the white color is looked like a white.

2-5: FOCUS

1. Receive the monoscope pattern.
2. Turn the Focus Volume fully counterclockwise once.
3. Adjust the **Focus Volume** until picture is distinct.

ELECTRICAL ADJUSTMENTS

2-6: HORIZONTAL POSITION

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(04)** on the remote control to select "H. POSI".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes minimum.

2-7: VERTICAL POSITION

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(05)** on the remote control to select "V. POSI".
4. Press the VOL. UP/DOWN button on the remote control until the horizontal line becomes fit to the notch of the shadow mask.

2-8: VERTICAL SIZE

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(07)** on the remote control to select "V. SIZE".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes $10 \pm 2\%$.

2-9: VERTICAL LINEARITY

NOTE: Adjust after performing adjustments in section 2-8.
After the adjustment of Vertical Linearity, reconfirm the Vertical Position and Vertical Size adjustments.

1. Receive the monoscope pattern.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(09)** on the remote control to select "V. LIN".
4. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes minimum.

2-10: BRIGHTNESS

1. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(16)** on the remote control to select "BRI. CENT".
2. Press the VOL. UP/DOWN button on the remote control until the brightness step No. becomes "50".
3. Receive a broadcast and check if the picture is normal.
4. Press the INPUT button on the remote control to set to the AV mode. Then perform the above adjustments 1~3.
5. Press the INPUT button on the remote control to set to the CS mode. Then perform the above adjustments 1~3.

2-11: TINT/COLOR CENT

1. Receive the color bar pattern. (RF Input)
2. Connect the oscilloscope to **TP806**.
3. Using the remote control, set the brightness, contrast, color and tint to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(26)** on the remote control to select "TINT".
5. Press the VOL. UP/DOWN button on the remote control until the section "A" becomes a straight line (**Refer to Fig. 2-1**).
6. Connect the oscilloscope to **TP805**.
7. Press the CH DOWN button 2 times to set to "COL. CENT" mode.
8. Adjust the VOLTS RANGE VARIABLE knob of the oscilloscope until the range between white 100% and 0% is set to 4.4 scales on the screen of the oscilloscope.
9. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to $115 \pm 10\%$ of the white level. (**Refer to Fig. 2-2**)
10. Receive the color bar pattern. (Audio Video Input)
11. Press the INPUT button on the remote control to set to the AV mode. Then perform the above adjustments 2~9.
12. Press the INPUT button on the remote control to set to the CS mode.
13. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(26)** on the remote control to select "TINT".
14. Press the VOL. UP/DOWN button on the remote control until the tint step No. becomes "50".
15. Press the CH DOWN button 2 times to set to "COL.CENT" mode.
16. Press the VOL. UP/DOWN button on the remote control until the color step No. becomes "62".

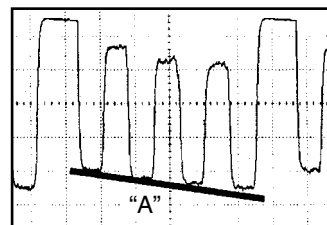


Fig. 2-1

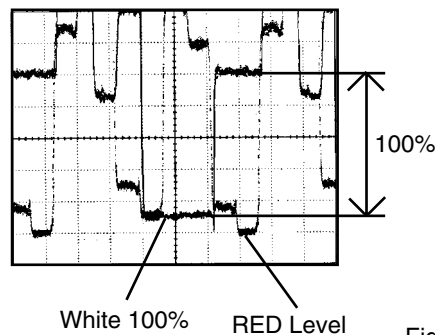


Fig. 2-2

ELECTRICAL ADJUSTMENTS

2-12: CONTRAST MAX MANUAL

1. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(18)** on the remote control to select "CONT. MAX".
2. Press the VOL. UP/DOWN button on the remote control until the contrast step No. becomes "85".
3. Receive a broadcast and check if the picture is normal.
4. Press the INPUT button on the remote control to set to the AV mode. Then perform the above adjustments 1~3.
5. Press the INPUT button on the remote control to set to the CS mode. Then perform the above adjustments 1~3.

2-13: SEPARATION 1, 2

Please do the method (1) or method (2) adjustment.

Method (1)

1. Set the multi-sound signal generator for each different L-ch and R-ch frequency (Ex. L-ch=2KHz, R-ch=400Hz) and receive the RF.
2. Connect the oscilloscope to the **Audio Out Jack**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(37)** on the remote control to select "SEP 1".
4. Press the VOL. UP/DOWN button on the remote control to adjust it until the audio output wave becomes a fine sine wave.
5. Press the CH UP button once the set to "SEP 2" mode. Then perform the above adjustment 4.

Method (2)

1. Set the multi-sound signal generator L-ch=1KHz, R-ch=Non input and receive the RF.
2. Connect the oscilloscope to the **Audio Out Jack (R-ch)**.
3. Press the AUDIO SELECT button on the remote control to set to the stereo mode.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(37)** on the remote control to select "SEP 1".
5. Press the VOL. UP/DOWN button on the remote control to adjust it until the R-ch output becomes minimum.
6. Set the multi-sound signal generator L-ch=Non input, R-ch=1KHz and receive the RF.
7. Connect the oscilloscope to the **Audio Out Jack (L-ch)**.
8. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(38)** on the remote control to select "SEP 2".
9. Press the VOL. UP/DOWN button on the remote control to adjust it until the L-ch output becomes minimum.

2-14: OSD HORIZONTAL

1. Activate the adjustment mode display of **Fig. 1-1**.
2. Press the VOL. UP/DOWN button on the remote control until the difference of A and B becomes minimum. (Refer to **Fig. 2-3**)

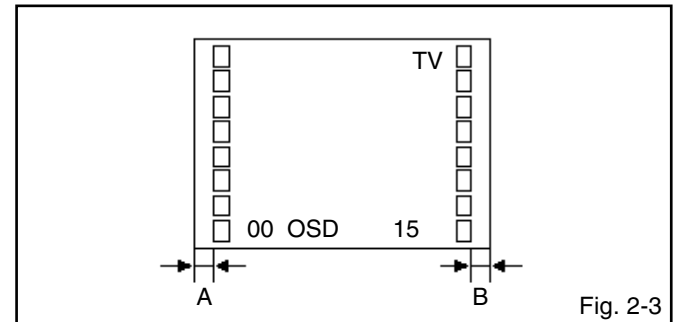


Fig. 2-3

2-15: Confirmation of Fixed Value (step No.)

Please check if the fixed values of the each adjustment items are set correctly referring below.

NO.	FUNCTION	RF	AV	CS
06	H SIZE	00	00	00
08	V CENT	25	25	25
10	VS CORR	10	10	10
17	SUB CONT	15	15	12
19	CONT CENT	40	40	40
20	CONT MIN	10	10	10
21	BRI MAX	88	88	88
22	BRI MIN	32	32	32
23	COL MAX	100	100	100
25	COL MIN	10	10	10
27	SHARP	30	30	30
28	RGB CONTRAST	18	18	18
29	PARABOLA	00	00	00
30	TRAPEZIN	00	00	00
31	COR TOP	00	00	00
32	COR BTM	00	00	00
33	V EHT	00	00	00
34	H EHT	00	00	00
35	FM LEVEL	01	01	01
39	T.STE	00	00	00

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue color.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

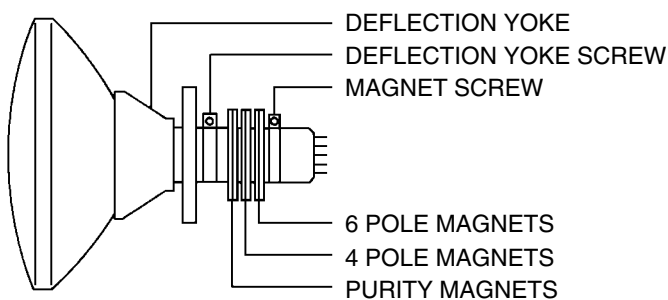


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left.
(Refer to Fig. 3-2-a)
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke.
(Refer to Fig. 3-2-b)

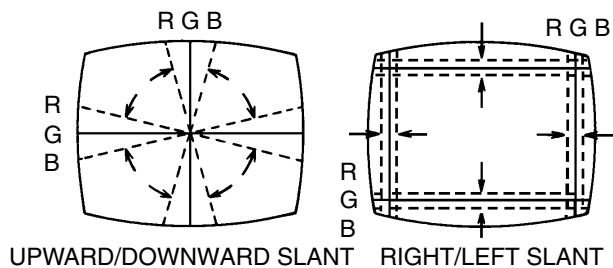


Fig. 3-2-a

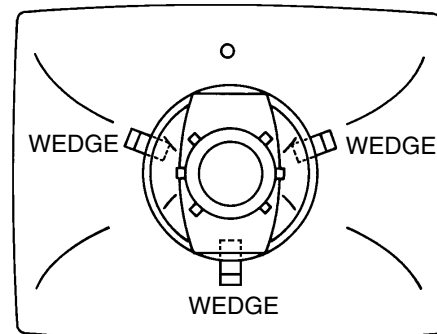
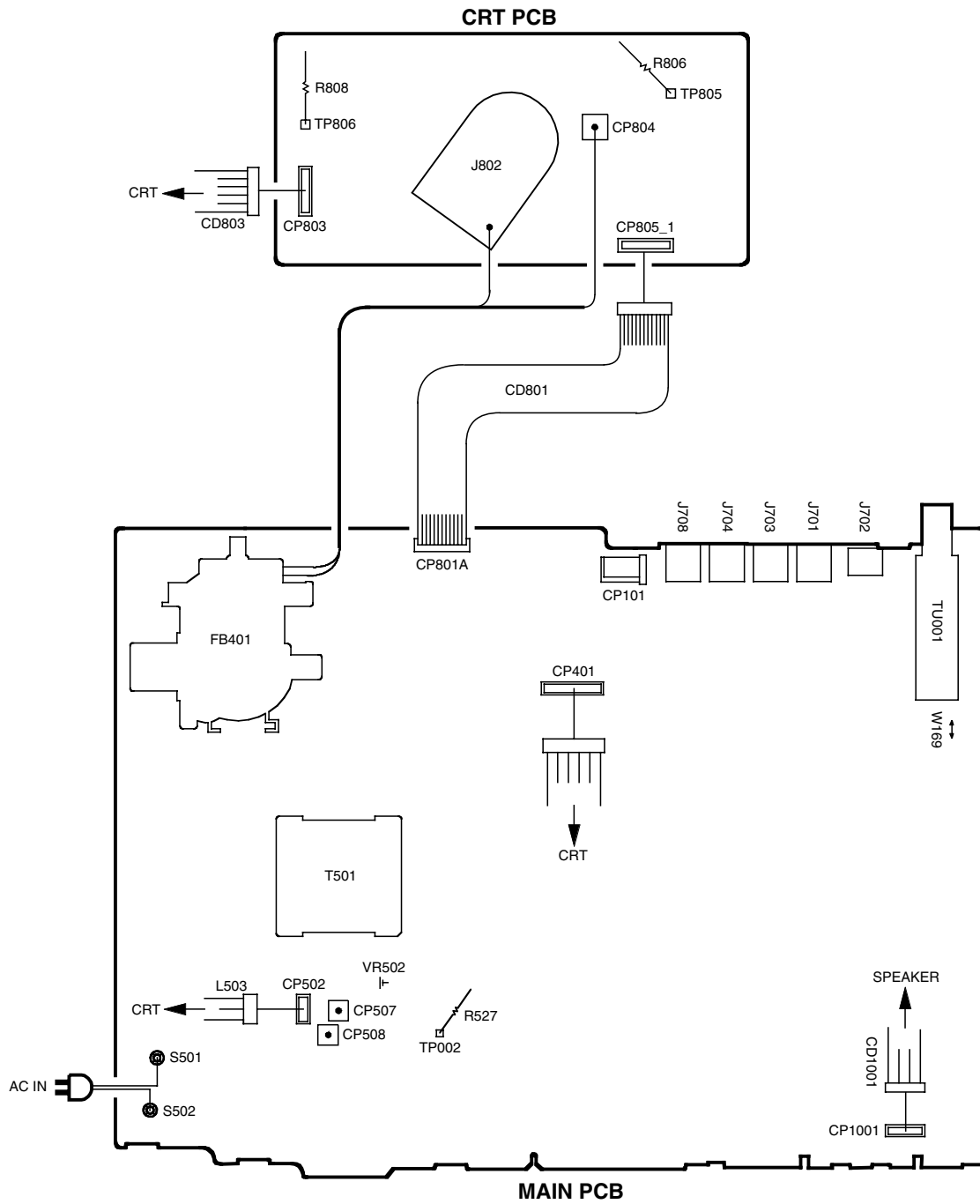


Fig. 3-2-b

ELECTRICAL ADJUSTMENTS

4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



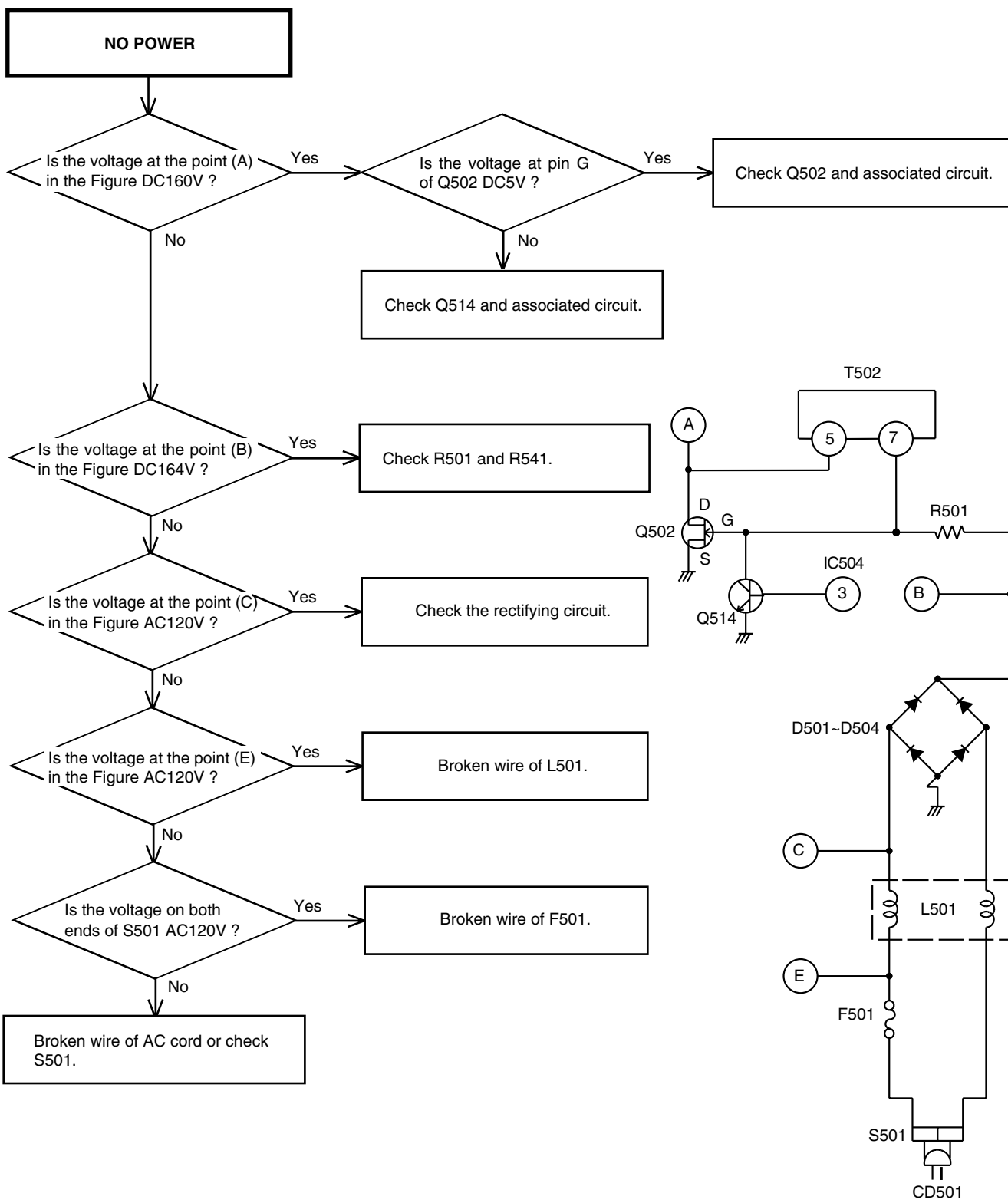
GUIDE FOR REPAIRING

IC DESCRIPTION

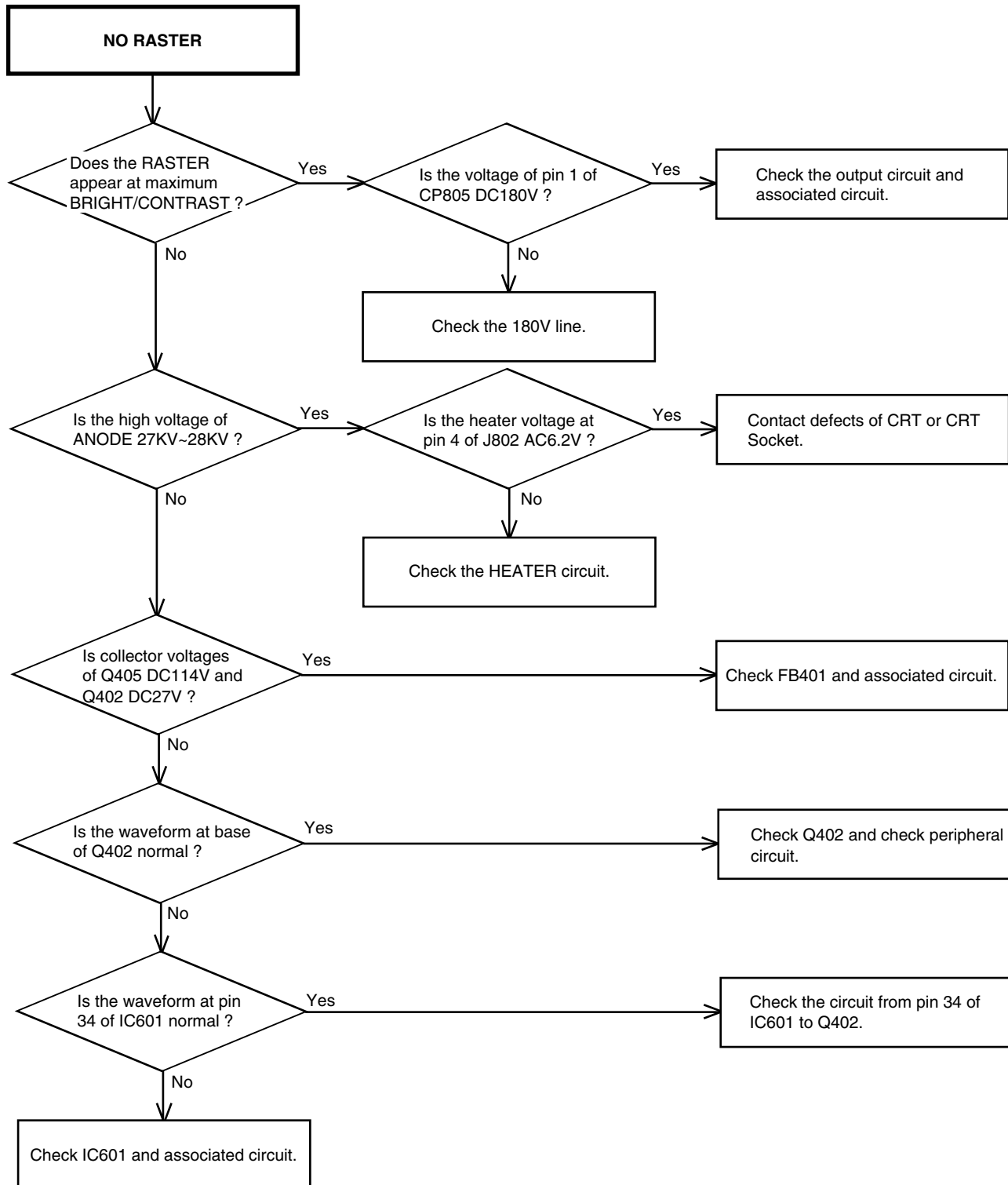
MAIN PCB OEC7075A (IC101)

NO.	Pin name	Symbol	I/O	Logic	Function	Option
1	P11/SCL1	AUDIO MUTE	O	0	Audio MUTE Output	C-MOS
2	P00/PM0	EXT MUTE	O	1	Audio MUTE Output for external Output	Nch-OD
3	P01/PWM1	STANDBY_H	O	1	Output HIGH at a teleevision power off.	Nch-OD
4	P02/PWM2	BBE-H	O		BBE Control Output	Nch-OD
5	P03/PWM3/AD1	AFT	I		Voltage of tuning input	Nch-OD
6	P04/PWM4/AD2	KEY1	I		Main unit key input	Nch-OD
7	P05/AD3	KEY2	I		Main unit key input	Nch-OD
8	P06/INT2/AD4	X-RAY	I		Input terminal of X-RAY detection.	Nch-OD
9	P07/INT1	REMOCON	I		Remote control input	Nch-OD
10	P20/SCLK/AD5	ONTIMER LED	O		ON-TIMER LED control output.	C-MOS
11	P21/AOUT/AD6		O			C-MOS
12	P22/SIN/AD7	AV2	O		External SW output2	C-MOS
13	P23/TIM3	AV1	O		External SW output1	C-MOS
14	P24/TIM2		O			C-MOS
15	P25/INT3	POWER FAIL	I	0	Power failure detector input	C-MOS
16	P26/XCIN	DEGAUSS_H	O	1	Degauss output	C-MOS
17	P27/XCOUT	X-RAY_TEST	O	1	X-RAY detector input	C-MOS
18	CNVSS	CNVSS			GND	
19	XIN	Xin	I		Main Oscillation	
20	XOUT	Xout	O		Main Oscillation	
21	VSS	VSS			GND	
22	VCC	VCC			5V	
23	FILT	FILT		S		
24	HLF	HLF	O		Filter of slicer	
25	VHOLD	V.HOLD	I		Condenser of slicer	
26	CVIN	CVIN	I		Video signal input	
27	RESET	RESET	I	0	Reset signal input	
28	FSCIN	(FSCIN)	I		(Main Clock Occurrence circuit input)	
29	PONCONT/P15	POWER	O	1	Power control output.	C-MOS
30	P31/SCL3	SCL1	O		Serial clock output (IIC BUS)	C-MOS
31	P30/SDA3	SDA1	I/O		Serial data input/output	C-MOS
32	CLKCONT/P10	(CLOCK CONT)	O		(Main Clock Request output)	C-MOS
33	P55/OUT	BRANK	O	1	BLANK Output for OSD/CCD	C-MOS
34	P54/R	RED R	O	1	Red output of RGB image output	C-MOS
35	P53/G	GREEN G	O	1	Green output of RGB image output	C-MOS
36	P52/B	BLUE B	O	1	Blue output of RGB image output	C-MOS
37	P51/VSYNC	V.SYNC	I	0	Vertical synchronization input	
38	P50/HSYNC	H.SYNC	I	0	Horizontal synchronization input	
39	P16/AD8/TIM2	SYNC	I		Input terminal for H-SYNC.	C-MOS
40	P14/SDA2	IIC_OFF	I	0	Serial clock/data stop input	C-MOS
41	P13/SDA1	PROTECT	O	1	Output HIGH at turning off a television.	C-MOS
42	P12/SCL2	H_CTL	O	1	Output HIGH at turning off a television.	C-MOS

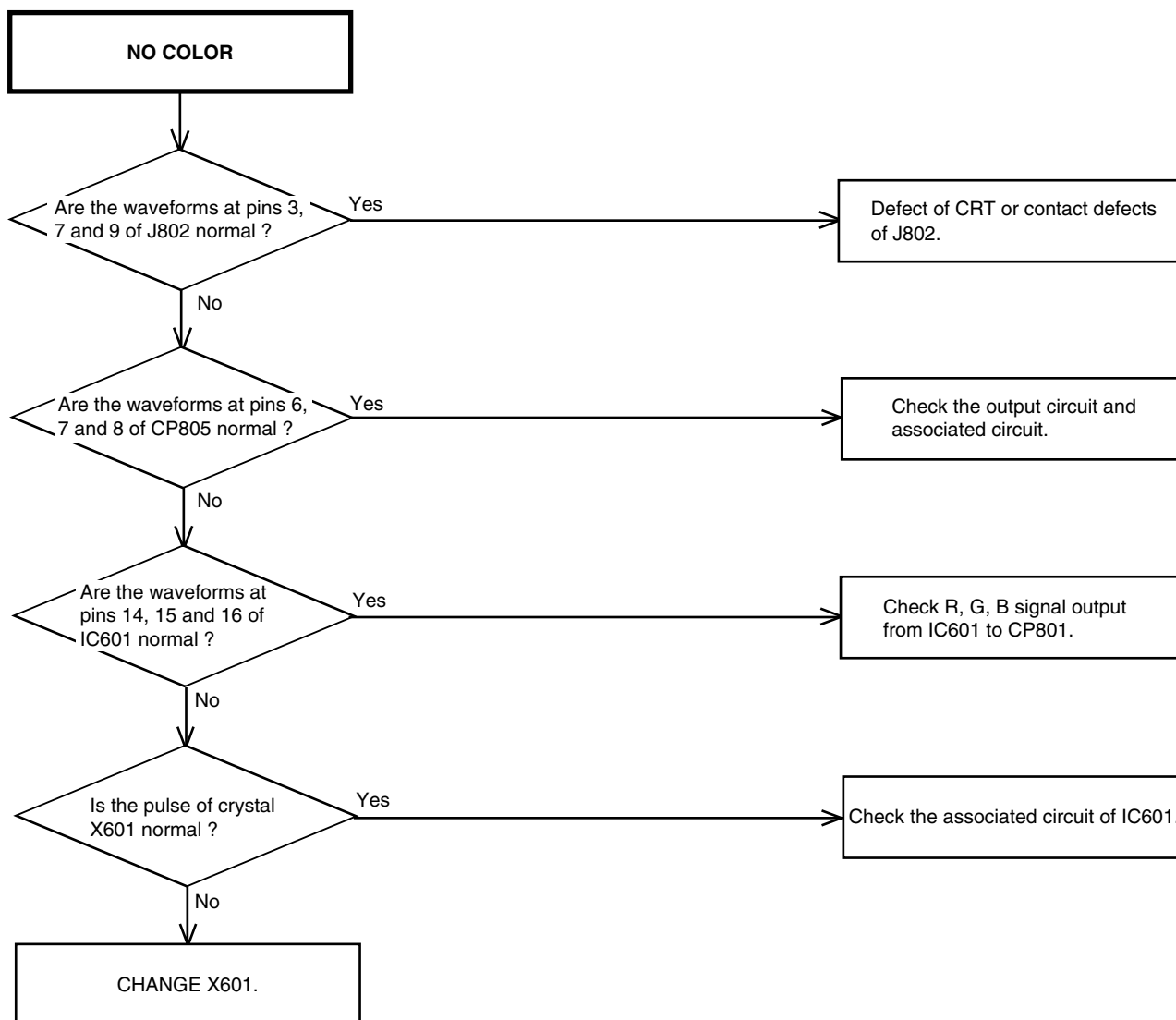
TROUBLESHOOTING GUIDE



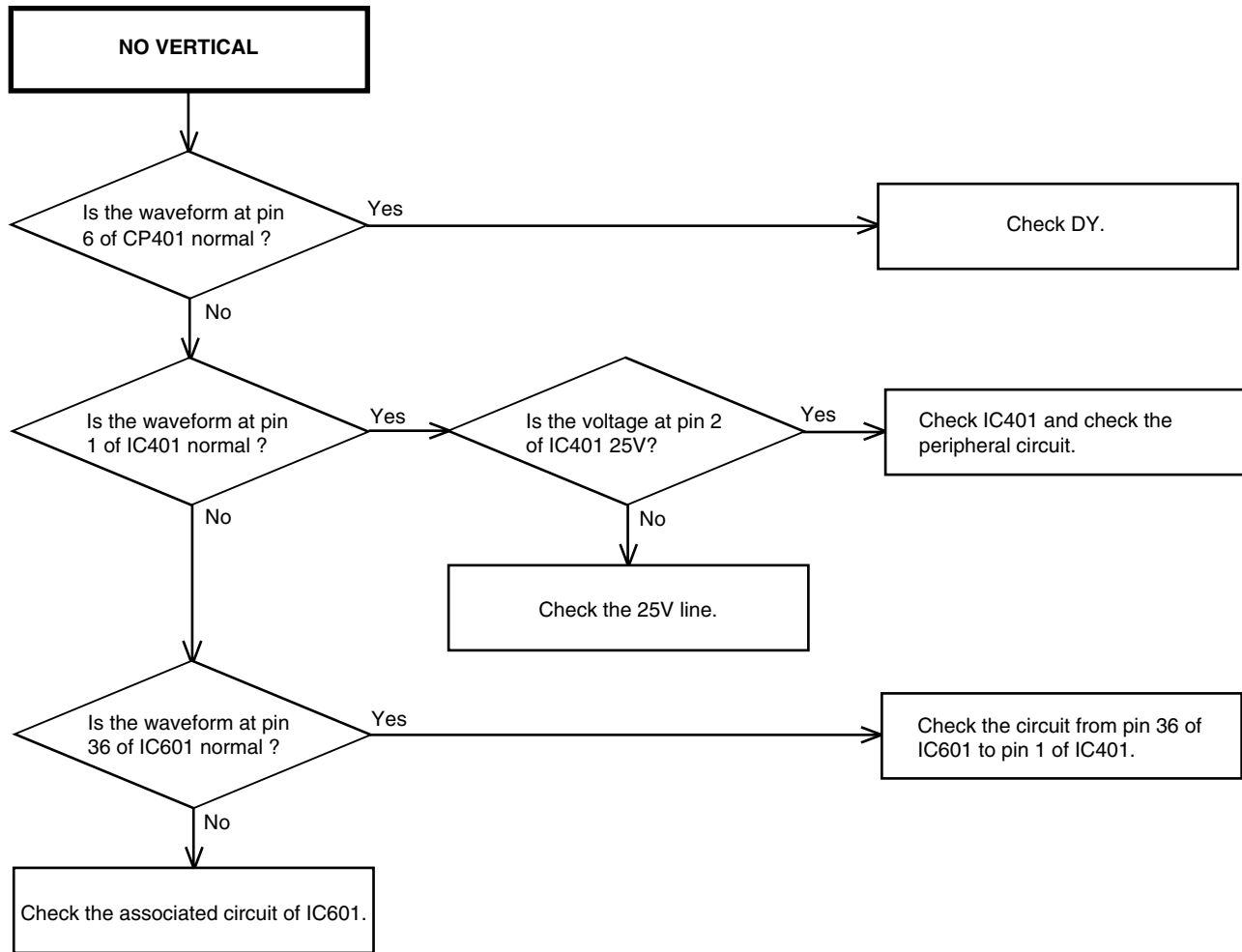
TROUBLESHOOTING GUIDE



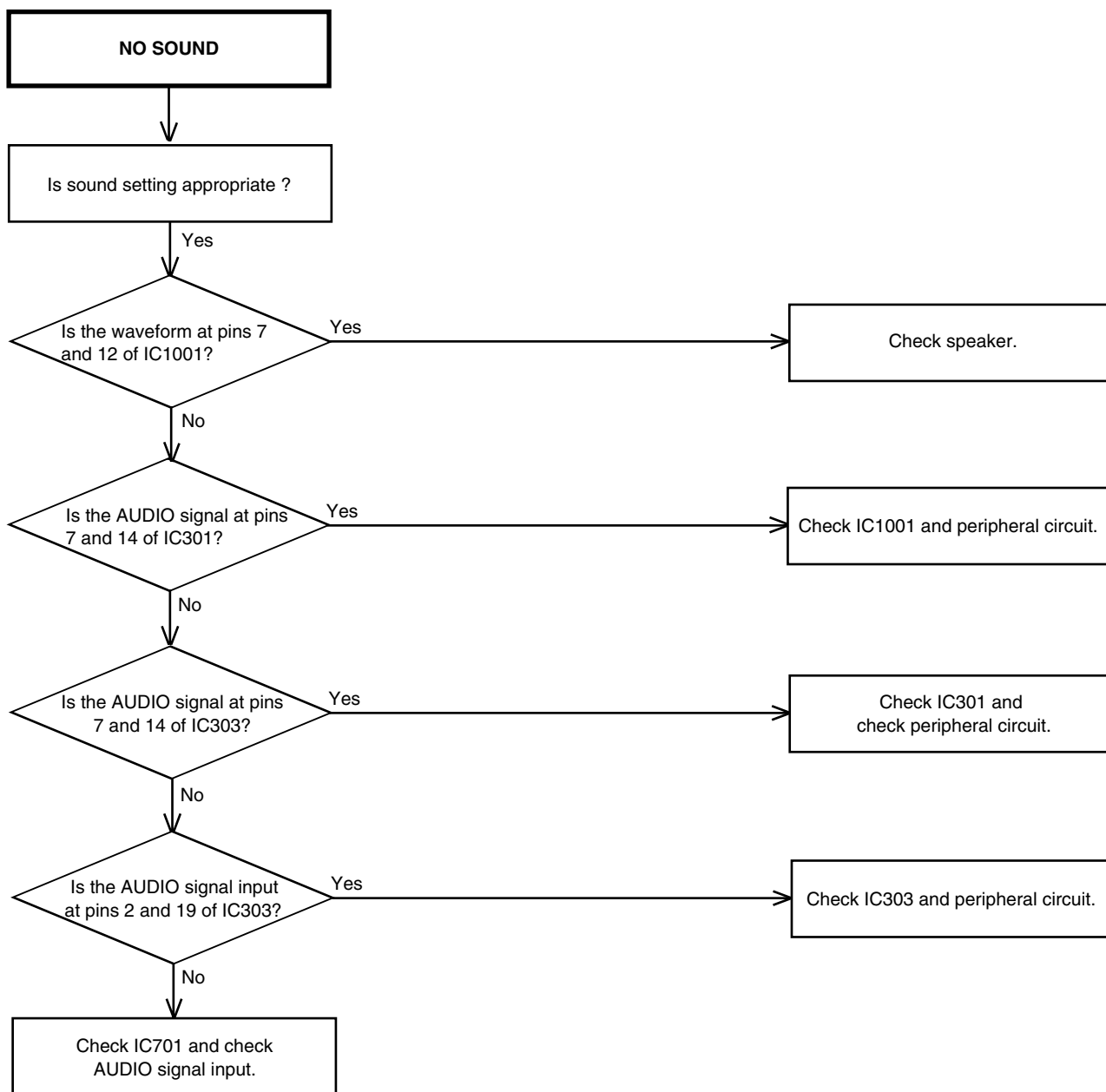
TROUBLESHOOTING GUIDE



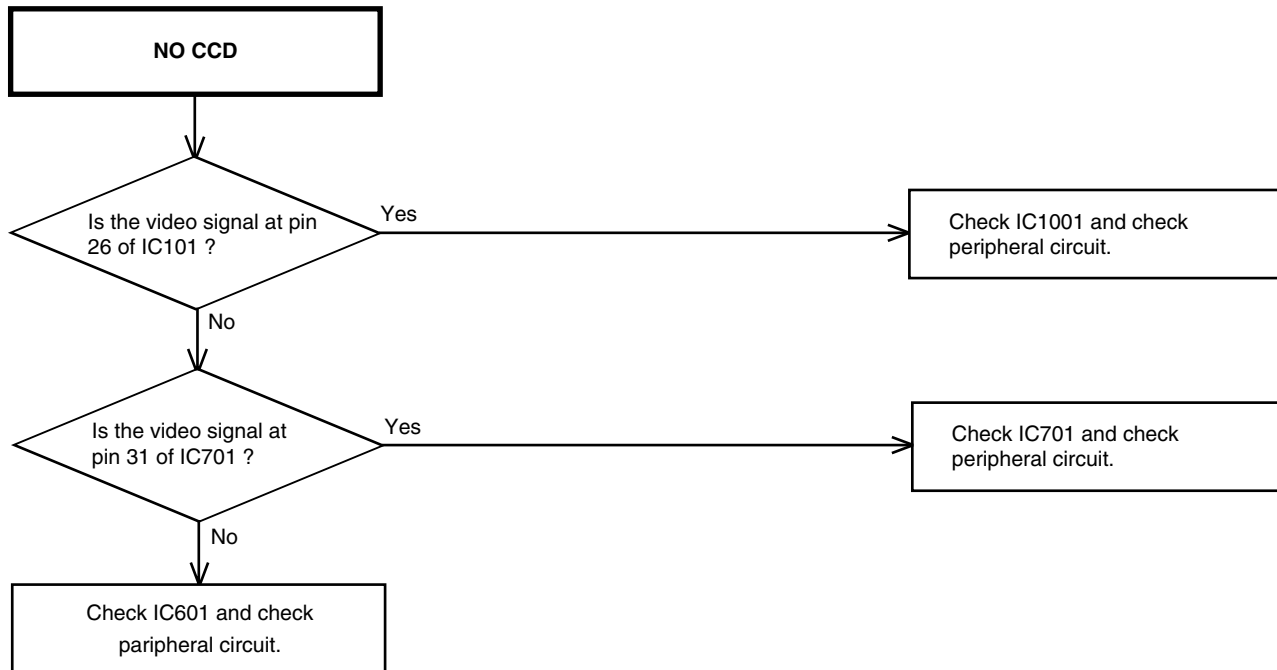
TROUBLESHOOTING GUIDE



TROUBLESHOOTING GUIDE



TROUBLESHOOTING GUIDE



PARTS LIST

CAUTION

- The parts identified by the \triangle symbol are important for the safety . Whenever replacing these parts, be sure to use specified ones to secure the safety .
- The parts not indicated in this Parts List and those which are filled with lines --- in the Parts No. columns will not be supplied .
- P. W. Board Ass'y will not be supplied, but those which are filled with the Parts No. in the Parts No. columns will be supplied .

ABBREVIATIONS OF RESISTORS, CAPACITORS

RESISTOR

RC.....	CARBON RESISTOR
MG R.....	METAL GLAZED RESISTOR

CAPACITORS

CC.....	CERAMIC CAPACITOR
CE.....	ALUMI ELECTROLYTIC CAPACITOR
CP.....	POLYESTER CAPACITOR
CPP.....	POLYPROPYLENE CAPACITOR
CPL.....	PLASTIC CAPACITOR
CMP.....	METAL POLYESTER CAPACITOR
CMPL.....	METAL PLASTIC CAPACITOR
CMPP.....	METAL POLYPROPYLENE CAPACITOR


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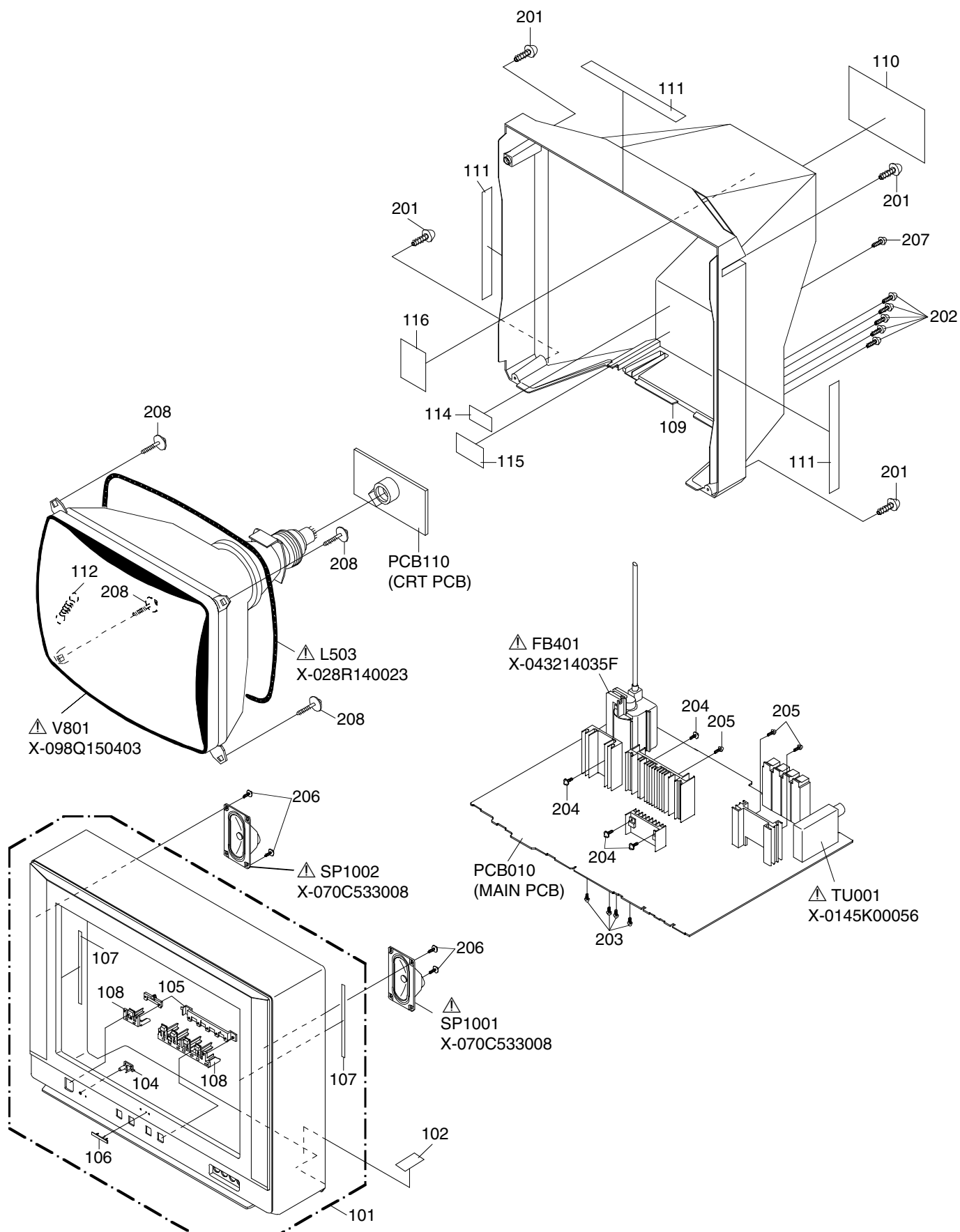
USING P.W. BOARD

P.W.B ASS'Y	Model AV-14F703
MAIN PCB ASS'Y	X-A3L005J010
CRT PCB ASS'Y	X-A3L005J110

MECHANICAL REPLACEMENT PARTS LIST

 Ref.No.	Part No.	Part Name	Description
101	X-A3L005J720	CABINET,FRONT ASSY	
102	X-7230006818	SHEET,CAUTION	
104	X-713WPA0167	GLASS,LED	
105	X-735WPA0583	BUTTON,HOLDER	
106	X-7235380006	BADGE,BRAND	
107	X-800WQ0A009	FELT SHEET	
108	X-735WPBA299	BUTTON,FRAME	
109	X-702WPAA208	CABINET,BACK	
110	X-722538A018	SHEET,RATING	
111	X-800WQ00039	FELT SHEET	
112	X-741WUA0019	SPRING,EARTH	
114	X-7220001119	SHEET,CSA WARNING	
115	X-7220001107	SHEET,HWC	
116	X-726000A031	SHEET,CRT NO.	
201	X-8117540A64	SCREW,TAPPING(B0) TRUSS	4x16
202	X-8110630A04	SCREW,TAP TITE(P) BRAZIER	3x10
203	X-8109630802	SCREW,TAP TITE(B) BRAZIER	3x8
204	X-8109130A04	SCREW,TAP TITE(B) WH7	3x10
205	X-8107630804	SCREW,TAP TITE(S) BRAZIER	3x8
206	X-8110630804	SCREW,TAP TITE(P) BRAZIER	3x8
207	X-8117540A04	SCREW,TAPPING(B0) TRUSS	4x10
208	X-8121J50C04	SCREW,TAPPING(B0) GW15	5x30

MECHANICAL EXPLODED VIEW



ELECTRICAL REPLACEMENT PARTS LIST

MAIN PCB ASS'Y

△ Symbol No.	Part No.	Part Name	Description
PCB010	X-A3L005J010	MAIN PCB ASS'Y	TMA532B
VARIABLE RESISTORS			
VR502	X-V1163H4BTC	VOLUME,SEMI FIXED	EVNCYAA03BE4
RESISTORS			
R001	X-R002T2473J	RC	47KΩ 1/2W
R002	X-R002T2473J	RC	47KΩ 1/2W
R003	NRSA02J-334X	MG R	330KΩ 1/10W
R006	NRSA02J-271X	MG R	270Ω 1/10W
R007	NRSA02J-271X	MG R	270Ω 1/10W
R101	NRSA02J-561X	MG R	560Ω 1/10W
R102	NRSA02J-102X	MG R	1KΩ 1/10W
R103	NRSA02J-105X	MG R	1MΩ 1/10W
R104	NRSA02J-561X	MG R	560Ω 1/10W
R106	QRE141J-101Y	RC	100Ω 1/4W
R108	NRSA02J-472X	MG R	4.7KΩ 1/10W
R109	NRSA02J-472X	MG R	4.7KΩ 1/10W
R111	NRSA02J-470X	MG R	47Ω 1/10W
R112	QRE141J-101Y	RC	100Ω 1/4W
R113	NRSA02J-221X	MG R	220Ω 1/10W
R114	NRSA02J-222X	MG R	2.2KΩ 1/10W
R115	NRSA02J-473X	MG R	47KΩ 1/10W
R116	NRSA02J-222X	MG R	2.2KΩ 1/10W
R117	QRE141J-221Y	RC	220Ω 1/4W
R119	NRSA02J-473X	MG R	47KΩ 1/10W
R121	NRSA02J-472X	MG R	4.7KΩ 1/10W
R122	NRSA02J-472X	MG R	4.7KΩ 1/10W
R123	NRSA02J-472X	MG R	4.7KΩ 1/10W
R124	NRSA02J-473X	MG R	47KΩ 1/10W
R125	NRSA02J-473X	MG R	47KΩ 1/10W
R126	NRSA02J-272X	MG R	2.7KΩ 1/10W
R127	NRSA02J-102X	MG R	1KΩ 1/10W
R128	QRE141J-333Y	RC	33KΩ 1/4W
R129	NRSA02J-392X	MG R	3.9KΩ 1/10W
R130	NRSA02J-821X	MG R	820Ω 1/10W
R131	NRSA02J-103X	MG R	10KΩ 1/10W
R132	NRSA02J-333X	MG R	33KΩ 1/10W
R133	NRSA02J-103X	MG R	10KΩ 1/10W
R134	NRSA02J-103X	MG R	10KΩ 1/10W
R138	NRSA02J-102X	MG R	1KΩ 1/10W
R139	NRSA02J-102X	MG R	1KΩ 1/10W
R140	NRSA02J-102X	MG R	1KΩ 1/10W
R141	NRSA02J-102X	MG R	1KΩ 1/10W
R142	QRE141J-103Y	RC	10KΩ 1/4W
R144	NRSA02J-103X	MG R	10KΩ 1/10W
R146	NRSA02J-472X	MG R	4.7KΩ 1/10W
R147	NRSA02J-102X	MG R	1KΩ 1/10W
R148	QRE141J-102Y	RC	1KΩ 1/4W
R149	QRE141J-102Y	RC	1KΩ 1/4W
R150	NRSA02J-472X	MG R	4.7KΩ 1/10W
R151	NRSA02J-472X	MG R	4.7KΩ 1/10W
R155	NRSA02J-472X	MG R	4.7KΩ 1/10W
R156	NRSA02J-103X	MG R	10KΩ 1/10W
R157	NRSA02J-103X	MG R	10KΩ 1/10W
R201	NRSA02J-102X	MG R	1KΩ 1/10W
R202	NRSA02J-102X	MG R	1KΩ 1/10W
R203	NRSA02J-122X	MG R	1.2KΩ 1/10W
R204	NRSA02J-221X	MG R	220Ω 1/10W
R205	NRSA02J-101X	MG R	100Ω 1/10W
R209	NRSA02J-333X	MG R	33KΩ 1/10W
R210	X-R903N8221J	RC	220Ω 1/8W
R211	NRSA02J-222X	MG R	2.2KΩ 1/10W
R212	NRSA02J-332X	MG R	3.3KΩ 1/10W
R213	NRSA02J-471X	MG R	470Ω 1/10W
R214	X-R903N8681J	RC	680Ω 1/8W
R215	NRSA02J-471X	MG R	470Ω 1/10W
R217	NRSA02J-682X	MG R	6.8KΩ 1/10W
R218	NRSA02J-222X	MG R	2.2KΩ 1/10W
R219	X-R903N8391J	RC	390Ω 1/8W
R220	X-R903N8121J	RC	120Ω 1/8W
R221	QRE141J-221Y	RC	220Ω 1/4W
R223	NRSA02J-271X	MG R	270Ω 1/10W
R299	X-R00106154J	RC	150KΩ 1/6W
R301	NRSA02J-203X	MG R	20KΩ 1/10W
R302	NRSA02J-203X	MG R	20KΩ 1/10W
R303	NRSA02J-203X	MG R	20KΩ 1/10W
R304	NRSA02J-203X	MG R	20KΩ 1/10W

△ Symbol No.	Part No.	Part Name	Description
RESISTORS			
R305	NRSA02J-103X	MG R	10KΩ 1/10W
R314	NRSA02J-152X	MG R	1.5KΩ 1/10W
R319	NRSA02J-472X	MG R	4.7KΩ 1/10W
R320	NRSA02J-152X	MG R	1.5KΩ 1/10W
R321	NRSA02J-472X	MG R	4.7KΩ 1/10W
R322	NRSA02J-562X	MG R	5.6KΩ 1/10W
R323	NRSA02J-562X	MG R	5.6KΩ 1/10W
R324	NRSA02J-182X	MG R	1.8KΩ 1/10W
R325	NRSA02J-182X	MG R	1.8KΩ 1/10W
R326	QRE141J-101Y	RC	100Ω 1/4W
R327	NRSA02J-104X	MG R	100KΩ 1/10W
R328	NRSA02J-101X	MG R	100Ω 1/10W
R330	QRE141J-103Y	RC	10KΩ 1/4W
R331	NRSA02J-103X	MG R	10KΩ 1/10W
R333	NRSA02J-103X	MG R	10KΩ 1/10W
R335	QRE141J-102Y	RC	1KΩ 1/4W
R402	X-R6558A561J	R,FUSE	560Ω 2W
R403	NRSA02J-331X	MG R	330Ω 1/10W
R406	X-R0L2U2471J	RC	470Ω 1/2W
R407	NRSA02J-562X	MG R	5.6KΩ 1/10W
△ R410	X-R3X28A221J	R,METAL OXIDE	220Ω 2W
R412	NRSA02J-682X	MG R	6.8KΩ 1/10W
R413	X-R4X5T6123F	R,METAL	12KΩ 1/6W
R414	X-R4X5T6273F	R,METAL	27KΩ 1/6W
R415	NRSA02J-821X	MG R	820Ω 1/10W
R417	NRSA02J-333X	MG R	33KΩ 1/10W
△ R420	X-R002T22R2J	RC	2.2Ω 1/2W
△ R421	X-R0L2U2681J	RC	680Ω 1/2W
△ R426	X-R4X5T6472F	R,METAL	4.7KΩ 1/6W
R427	X-R002T2102J	RC	1KΩ 1/2W
R428	QRE141J-101Y	RC	100Ω 1/4W
R429	X-R002T2681J	RC	680Ω 1/2W
R430	X-R002T2124J	RC	120KΩ 1/2W
R432	X-R002T2822J	RC	8.2KΩ 1/2W
R433	X-R002T2681J	RC	680Ω 1/2W
△ R436	X-R4X5T6183F	R,METAL	18KΩ 1/6W
R437	X-R002T22R2J	RC	2.2Ω 1/2W
△ R438	X-R6358A6R8J	R,FUSE	6.8Ω 2W
△ R439	X-R3X181102J	R,METAL OXIDE	1KΩ 1W
△ R441	X-R4X5T6153F	R,METAL	15KΩ 1/6W
R442	QRE141J-222Y	RC	2.2KΩ 1/4W
R443	X-R002T2683J	RC	68KΩ 1/2W
△ R452	X-R3X181561J	R,METAL OXIDE	560Ω 1W
R453	NRSA02J-103X	MG R	10KΩ 1/10W
R454	X-R002T2221J	RC	220Ω 1/2W
△ R500	X-R0G3K2275K	RC	2.7MΩ 1/2W
△ R501	X-R5X2AE1R2J	R,CEMENT	1.2Ω 7W
△ R502	X-R3X28A331J	R,METAL OXIDE	330Ω 2W
R505	QRE141J-103Y	RC	10KΩ 1/4W
R507	X-R0L2U2563J	RC	56KΩ 1/2W
△ R508	QRE141J-682Y	RC	6.8KΩ 1/4W
R510	NRSA02J-101X	MG R	100Ω 1/10W
R511	NRSA02J-223X	MG R	22KΩ 1/10W
R512	QRE141J-102Y	RC	1KΩ 1/4W
R513	NRSA02J-103X	MG R	10KΩ 1/10W
R515	QRE141J-103Y	RC	10KΩ 1/4W
R516	NRSA02J-103X	MG R	10KΩ 1/10W
△ R517	X-R3X28B010J	R,METAL	1Ω 3W
△ R518	X-R002T2155J	RC	1.5MΩ 1/2W
R519	X-R002T2102J	RC	1KΩ 1/2W
R520	QRE141J-391Y	RC	390Ω 1/4W
△ R521	X-R3X18A270J	R,METAL OXIDE	27Ω 2W
△ R522	X-R3X18A270J	R,METAL OXIDE	27Ω 2W
R524	NRSA02J-222X	MG R	2.2KΩ 1/10W
R525	NRSA02J-473X	MG R	47KΩ 1/10W
△ R527	X-R3X18AR82J	R,METAL OXIDE	0.82Ω 2W
R532	NRSA02J-152X	MG R	1.5KΩ 1/10W
R533	NRSA02J-271X	MG R	270Ω 1/10W
R535	QRE141J-562Y	RC	5.6KΩ 1/4W
R536	QRE141J-104Y	RC	100KΩ 1/4W
R537	QRE141J-104Y	RC	100KΩ 1/4W
R539	QRE141J-125Y	RC	1.2MΩ 1/4W
R540	QRE141J-125Y	RC	1.2MΩ 1/4W
△ R541	X-R63581R22J	R,FUSE	0.22Ω 1W
△ R542	X-R3X181R27J	R,METAL OXIDE	0.27Ω 1W
R543	X-R00104102J	CR	1KΩ 1/4W
R544	NRSA02J-271X	MG R	270Ω 1/10W
R545	NRSA02J-151X	MG R	150Ω 1/10W
R546	QRE141J-101Y	RC	100Ω 1/4W
R547	QRE141J-101Y	RC	100Ω 1/4W
R548	X-R00106103J	RC	10KΩ 1/6W

△ Symbol No. Part No. Part Name Description

RESISTORS

R553	X-R002T2682J	RC	6.8KΩ	1/2W
△ R554	X-R002T2104J	RC	100KΩ	1/2W
R601	NRSA02J-184X	MG R	180KΩ	1/10W
R602	NRSA02J-102X	MG R	1KΩ	1/10W
R603	NRSA02J-332X	MG R	3.3KΩ	1/10W
R604	NRSA02J-471X	MG R	470Ω	1/10W
R605	NRSA02J-103X	MG R	10KΩ	1/10W
R607	NRSA02J-222X	MG R	2.2KΩ	1/10W
R608	QRE141J-271Y	RC	270Ω	1/4W
R609	NRSA02J-101X	MG R	100Ω	1/10W
R610	NRSA02J-272X	MG R	2.7KΩ	1/10W
R611	NRSA02J-101X	MG R	100Ω	1/10W
R612	NRSA02J-272X	MG R	2.7KΩ	1/10W
R613	NRSA02J-101X	MG R	100Ω	1/10W
R614	NRSA02J-272X	MG R	2.7KΩ	1/10W
R615	NRSA02J-182X	MG R	1.8KΩ	1/10W
R616	X-R903N8221J	RC	220Ω	1/8W
R617	X-R903N8221J	RC	220Ω	1/8W
R618	NRSA02J-274X	MG R	270KΩ	1/10W
R619	NRSA02J-333X	MG R	33KΩ	1/10W
R624	NRSA02J-155X	MG R	1.5MΩ	1/10W
R625	NRSA02J-154X	MG R	150KΩ	1/10W
R631	X-R002T2221J	RC	220Ω	1/2W
R635	NRSA02J-333X	MG R	33KΩ	1/10W
R636	NRSA02J-222X	MG R	2.2KΩ	1/10W
R638	QRE141J-102Y	RC	1KΩ	1/4W
R640	NRSA02J-472X	MG R	4.7KΩ	1/10W
R702	NRSA02J-750X	MG R	75Ω	1/10W
R703	NRSA02J-750X	MG R	75Ω	1/10W
R705	NRSA02J-750X	MG R	75Ω	1/10W
R707	NRSA02J-750X	MG R	75Ω	1/10W
R708	NRSA02J-750X	MG R	75Ω	1/10W
R711	NRSA02J-392X	MG R	3.9KΩ	1/10W
R713	NRSA02J-680X	MG R	68Ω	1/10W
R714	NRSA02J-471X	MG R	470Ω	1/10W
R715	NRSA02J-102X	MG R	1KΩ	1/10W
R716	NRSA02J-471X	MG R	470Ω	1/10W
R717	NRSA02J-471X	MG R	470Ω	1/10W
R720	QRE141J-101Y	RC	100Ω	1/4W
R721	NRSA02J-122X	MG R	1.2KΩ	1/10W
R722	NRSA02J-152X	MG R	1.5KΩ	1/10W
R723	NRSA02J-471X	MG R	470Ω	1/10W
R724	NRSA02J-332X	MG R	3.3KΩ	1/10W
R725	NRSA02J-332X	MG R	3.3KΩ	1/10W
R726	NRSA02J-271X	MG R	270Ω	1/10W
R727	NRSA02J-102X	MG R	1KΩ	1/10W
R728	NRSA02J-392X	MG R	3.9KΩ	1/10W
R730	NRSA02J-184X	MG R	180KΩ	1/10W
R731	NRSA02J-224X	MG R	220KΩ	1/10W
R732	NRSA02J-392X	MG R	3.9KΩ	1/10W
R734	QRE141J-103Y	RC	10KΩ	1/4W
R736	NRSA02J-102X	MG R	1KΩ	1/10W
R737	NRSA02J-184X	MG R	180KΩ	1/10W
R738	NRSA02J-224X	MG R	220KΩ	1/10W
R739	NRSA02J-392X	MG R	3.9KΩ	1/10W
R740	NRSA02J-122X	MG R	1.2KΩ	1/10W
R741	NRSA02J-750X	MG R	75Ω	1/10W
R747	NRSA02J-750X	MG R	75Ω	1/10W
R748	NRSA02J-392X	MG R	3.9KΩ	1/10W
R749	NRSA02J-392X	MG R	3.9KΩ	1/10W
R750	NRSA02J-750X	MG R	75Ω	1/10W
R751	NRSA02J-102X	MG R	1KΩ	1/10W
R752	NRSA02J-102X	MG R	1KΩ	1/10W
R770	NRSA02J-471X	MG R	470Ω	1/10W
R904	NRSA02J-471X	MG R	470Ω	1/10W
R905	NRSA02J-471X	MG R	470Ω	1/10W
R906	NRSA02J-224X	MG R	220KΩ	1/10W
R907	QRE141J-221Y	RC	220Ω	1/4W
R908	QRE141J-221Y	RC	220Ω	1/4W
R1001	X-R002T2271J	RC	270Ω	1/2W
R1002	X-R002T2271J	RC	270Ω	1/2W
R1003	NRSA02J-472X	MG R	4.7KΩ	1/10W
R1004	NRSA02J-472X	MG R	4.7KΩ	1/10W
R1009	NRSA02J-103X	MG R	10KΩ	1/10W
R1010	NRSA02J-103X	MG R	10KΩ	1/10W
R1011	NRSA02J-103X	MG R	10KΩ	1/10W
R1013	NRSA02J-103X	MG R	10KΩ	1/10W
R1502	NRSA02J-101X	MG R	100Ω	1/10W
R1503	NRSA02J-101X	MG R	100Ω	1/10W
R1504	NRSA02J-822X	MG R	8.2KΩ	1/10W
R1505	NRSA02J-682X	MG R	6.8KΩ	1/10W

△ Symbol No. Part No. Part Name Description

RESISTORS

R1506	NRSA02J-332X	MG R	3.3KΩ	1/10W
R1507	NRSA02J-102X	MG R	1KΩ	1/10W
R1508	NRSA02J-682X	MG R	6.8KΩ	1/10W
R1509	NRSA02J-473X	MG R	47KΩ	1/10W
R1510	NRSA02J-473X	MG R	47KΩ	1/10W
R1511	NRSA02J-122X	MG R	1.2KΩ	1/10W
R1513	NRSA02J-471X	MG R	470Ω	1/10W
R1514	NRSA02J-471X	MG R	470Ω	1/10W
R1515	NRSA02J-471X	MG R	470Ω	1/10W
R1516	NRSA02J-102X	MG R	1KΩ	1/10W
R1517	NRSA02J-470X	MG R	47Ω	1/10W
R1518	NRSA02J-273X	MG R	27KΩ	1/10W
R1519	NRSA02J-243X	MG R	24KΩ	1/10W
R1520	NRSA02J-122X	MG R	1.2KΩ	1/10W
R1521	QRE141J-102Y	RC	1KΩ	1/4W
R1522	NRSA02J-102X	MG R	1KΩ	1/10W
R1525	QRE141J-102Y	RC	1KΩ	1/4W
R1527	QRE141J-153Y	RC	15KΩ	1/4W
R1528	NRSA02J-913X	MG R	91KΩ	1/10W

CAPACITORS

C001	NCF21HZ-104X	CC	0.1μF	50V	F
C002	X-E02LT0471M	CE	470μF	6.3V	
C003	QEKJ1HM-225Z	CE	2.2μF	50V	
C004	X-P1S3T0223J	CP	0.022μF	50V	
C103	X-CS0RCH4S1J	CC	56pF	50V	CH
C105	NDC21HJ-151X	CC	150pF	50V	CH
C107	NCB21EK-104X	CC	0.1μF	25V	B
C108	X-CS0RCH4U1J	CC	68pF	50V	CH
C109	X-CS0RCH4U1J	CC	68pF	50V	CH
C111	QEKJ1HM-105Z	CE	1μF	50V	
C112	X-CS0RB04H3K	CC	0.0022μF	50V	B
C115	X-CHG0B04G2J	CC	180pF	50V	B
C117	QEKJ1HM-474Z	CE	0.47μF	50V	
C118	X-E02LF0222M	CE	2200μF	6.3V	
C121	NDC21HJ-101X	CC	100pF	50V	CH
C122	QEKJ1HM-105Z	CE	1μF	50V	
C123	QEKJ1CM-106Z	CE	10μF	16V	
C124	NCB21EK-104X	CC	0.1μF	25V	B
C125	NDC21HJ-100X	CC	10pF	50V	CH
C128	NCB21HK-102X	CC	0.001μF	50V	B
C132	NDC21HJ-821X	CC	820pF	50V	CH
C135	NDC21HJ-121X	CC	120pF	50V	CH
C136	X-CS0RCH4K1J	CC	27pF	50V	CH
C137	X-CS0RCH4K1J	CC	27pF	50V	CH
C138	NCB21HK-103X	CC	0.01μF	50V	B
C139	NCB21HK-103X	CC	0.01μF	50V	B
C140	NCB21HK-103X	CC	0.01μF	50V	B
C143	NDC21HJ-101X	CC	100pF	50V	CH
C201	NCB21HK-103X	CC	0.01μF	50V	B
C202	NCB21HK-103X	CC	0.01μF	50V	B
C203	QETN1AM-107Z	CE	100μF	10V	
C204	QETN1HM-106Z	CE	10μF	50V	
C206	NCB21EK-104X	CC	0.1μF	25V	B
C208	NCB21HK-103X	CC	0.01μF	50V	B
C209	X-E02LU5R47M	CE	0.47μF	50V	
C210	X-CS0RB04H3K	CC	0.0022μF	50V	B
C211	X-E02LU5R22M	CE	0.22μF	50V	
C212	NCB21HK-103X	CC	0.01μF	50V	B
C213	X-E02LU2101M	CE	100μF	16V	
C214	QETN1HM-106Z	CE	10μF	50V	
C215	X-CS0RCH4L1J	CC	33pF	50V	CH
C216	QETN1HM-106Z	CE	10μF	50V	
C218	NCB21HK-103X	CC	0.01μF	50V	B
C220	X-CS0RB04H3K	CC	0.0022μF	50V	B
C221	NCB21HK-103X	CC	0.01μF	50V	B
C222	NCB21HK-103X	CC	0.01μF	50V	B
C228	NCB21HK-103X	CC	0.01μF	50V	B
C229	NDC21HJ-101X	CC	100pF	50V	CH
C303	QETN1CM-476Z	CE	47μF	16V	
C304	X-E62KU52R2M	CE	2.2μF	50V	
C305	X-E62KU52R2M	CE	2.2μF	50V	
C306	NCB21HK-332X	CC	0.0033μF	50V	B
C307	NCB21HK-332X	CC	0.0033μF	50V	B
C308	X-CS0RB04L4K	CC	0.033μF	50V	B
C309	X-CS0RB04L4K	CC	0.033μF	50V	B
C310	QEKJ1CM-106Z	CE	10μF	16V	
C311	QETN1HM-106Z	CE	10μF	50V	

△	Symbol No.	Part No.	Part Name	Description	
CAPACITORS					
	C312	QEKJ1CM-106Z	CE	10μF 16V	
	C313	X-E02LU2101M	CE	100μF 16V	
	C314	QEKJ1CM-106Z	CE	10μF 16V	
	C315	X-E02LU1221M	CE	220μF 10V	
	C325	NCB21HK-103X	CC	0.01μF 50V	B
	C326	QETN1CM-476Z	CE	47μF 16V	
	C328	QEKJ1HM-225Z	CE	2.2μF 50V	
	C329	QEKJ1HM-225Z	CE	2.2μF 50V	
	C330	NCB21HK-223X	CC	0.022μF 50V	B
	C331	NCB21HK-223X	CC	0.022μF 50V	B
	C332	X-CS0RB02Q5K	CC	0.47μF 16V	B
	C333	X-CS0RB02Q5K	CC	0.47μF 16V	B
	C334	X-CS0RB04L4K	CC	0.033μF 50V	B
	C335	X-CS0RB04L4K	CC	0.033μF 50V	B
	C336	NDC21HJ-101X	CC	100pF 50V	CH
	C337	NDC21HJ-101X	CC	100pF 50V	CH
	C338	NCB21HK-102X	CC	0.001μF 50V	B
	C339	NCB21HK-103X	CC	0.01μF 50V	B
	C402	X-P235W1103J	CMP	0.01μF 100V	MKT
	C403	X-E02LT5220M	CE	22μF 50V	
	C405	X-CS0RCH4S2J	CC	560pF 50V	CH
	C406	X-E02LT5010M	CE	1μF 50V	
	C407	X-E02LT4101M	CE	100μF 35V	
△	C408	X-E5EZ3102M	CE	100μF 25V	
	C409	X-E02LT5100M	CE	10μF 50V	
	C410	X-E02LTD2R2M	CE	2.2μF 250V	
	C411	X-C0JTSLSH1J	CC	22pF 500V	SL
△	C413	X-E02LF4102M	CE	1000μF 35V	
	C415	X-C0JTB0512K	CC	100pF 500V	B
	C416	QEKJ1HM-105Z	CE	1μF 50V	
	C417	X-P235W1224J	CMP	0.22μF 100V	MKT
	C418	X-P4J7F3274J	CMPP	0.27μF 250V	PMS
△	C420	X-P4N8FJ113H	CMPP	0.011μF 1.25KV	
	C425	X-C03L0R713K	CC	0.001μF 2KV	R
△	C426	X-E5EZFD220M	CE	22μF 250V	
	C427	X-P235W1104J	CMP	0.1μF 100V	MKT
	C428	X-CQGTB04B3K	CC	0.0012μF 50V	B
△	C430	X-E02LT8220M	CE	22μF 100V	
	C436	QETN1CM-476Z	CE	47μF 16V	
	C439	X-CHGTB0413K	CC	0.001μF 50V	B
△	C501	X-E02LF4102M	CE	1000μF 35V	
△	C502	X-C0JBB0713K	CC	0.001μF 2KV	B
△	C503	X-C0JBB0713K	CC	0.001μF 2KV	B
△	C504	X-E02LU5100M	CE	10μF 50V	
△	C505	X-P2472B104M	CMP	0.1μF 275V PHE840	
△	C506	X-P2472B104M	CMP	0.1μF 275V PHE840	
△	C507	X-E51CGC331M	CE	330μF 200V	
	C509	X-E02LU3470M	CE	47μF 25V	
	C512	X-P235W1473J	CMP	0.047μF 100V	MKT
△	C513	X-CD39E0M13M	CC	0.001μF 250V	
△	C514	X-CD39E0M13M	CC	0.001μF 250V	
	C516	X-C0JTB0513K	CC	0.001μF 500V	B
	C517	X-C03L0R713K	CC	0.001μF 2KV	R
	C518	X-C0JTB0513K	CC	0.001μF 500V	B
△	C519	X-CD39E0M13M	CC	0.001μF 250V	
△	C521	X-E62NFB101M	CE	100μF 160V	
△	C522	X-CD39E0M13M	CC	0.001μF 250V	
	C524	NCB21HK-103X	CC	0.01μF 50V	B
	C526	X-CS0RCH4H2J	CC	220pF 50V	CH
△	C527	X-E02LF2222M	CE	2200μF 16V	
	C528	X-E02LT2102M	CE	1000μF 16V	
	C530	X-E02LU1471M	CE	470μF 10V	
△	C531	X-E02LT2471M	CE	470μF 16V	
	C532	X-E02LT0102M	CE	1000μF 6.3V	
	C533	QEKJ1CM-106Z	CE	10μF 16V	
	C535	X-C03L0R7U2K	CC	680pF 2KV	R
	C539	X-E02LT82R2M	CE	2.2μF 100V	
	C541	NCB21HK-103X	CC	0.01μF 50V	B
	C554	NCB21HK-223X	CC	0.022μF 50V	B
	C601	NCB21EK-104X	CC	0.1μF 25V	B
	C602	NCB21EK-104X	CC	0.1μF 25V	B
	C604	QETN1HM-105Z	CE	1μF 50V	
	C605	NCB21EK-104X	CC	0.1μF 25V	B
	C606	NCB21EK-104X	CC	0.1μF 25V	B
	C607	NCB21HK-103X	CC	0.01μF 50V	B
	C608	QETN1HM-105Z	CE	1μF 50V	
	C609	NCB21HK-223X	CC	0.022μF 50V	B
	C612	QEKJ1HM-225Z	CE	2.2μF 50V	
	C614	X-CS0RB02Q5K	CC	0.47μF 16V	B
	C615	X-E02LU2101M	CE	100μF 16V	
	C616	QETN1CM-476Z	CE	47μF 16V	
	C617	X-CS0RB0216K	CC	1μF 16V	B

△	Symbol No.	Part No.	Part Name	Description	
CAPACITORS					
	C618	NCB21HK-103X	CC	0.01μF 50V	B
	C619	X-E02LT0471M	CE	470μF 6.3V	
	C620	NCB21EK-104X	CC	0.1μF 25V	B
	C621	NCB21EK-104X	CC	0.1μF 25V	B
	C622	NCB21EK-104X	CC	0.1μF 25V	B
	C623	NCB21HK-103X	CC	0.01μF 50V	B
	C624	QETN1AM-107Z	CE	100μF 10V	
	C625	X-E62KU54R7M	CE	4.7μF 50V	
	C626	X-CS0RB04B4K	CC	0.012μF 50V	B
	C627	X-CS0RCH480D	CC	8pF 50V	CH
	C629	X-CS0RB04H3K	CC	0.0022μF 50V	B
	C630	X-E02LU5R22M	CE	0.22μF 50V	
	C631	X-CS0RCH4H2J	CC	220pF 50V	CH
	C632	X-CS0RCH4H2J	CC	220pF 50V	CH
	C633	NCB21HK-103X	CC	0.01μF 50V	B
	C634	X-CS0RB03H5K	CC	0.22μF 25V	B
	C636	NCB21EK-104X	CC	0.1μF 25V	B
	C637	X-CS0RCH430C	CC	3pF 50V	CH
	C638	X-CS0RCH4H2J	CC	220pF 50V	CH
	C640	X-E02LT2102M	CE	1000μF 16V	
	C641	NCB21HK-102X	CC	0.001μF 50V	B
	C704	QETN1CM-477Z	CE	470μF 16V	
	C705	X-E00NU2470M	CE	47μF 16V	
	C706	X-CS0RCH480D	CC	8pF 50V	CH
	C707	X-CS0RB0216K	CC	1μF 16V	B
	C708	X-CS0RB0216K	CC	1μF 16V	B
	C711	X-E02LU2101M	CE	100μF 16V	
	C712	X-CS0RB0216K	CC	1μF 16V	B
	C713	QEKJ1CM-106Z	CE	10μF 16V	
	C714	QEKJ1CM-106Z	CE	10μF 16V	
	C715	QETN1CM-477Z	CE	470μF 16V	
	C720	X-CS0RCH4L1J	CC	33pF 50V	CH
	C721	X-CS0RB0216K	CC	1μF 16V	B
	C722	X-CS0RB0216K	CC	1μF 16V	B
	C724	QEKJ1HM-105Z	CE	1μF 50V	
	C725	QEKJ1HM-105Z	CE	1μF 50V	
	C726	X-CS0RB04S3K	CC	0.0056μF 50V	B
	C727	X-CS0RB04S3K	CC	0.0056μF 50V	B
	C728	X-CS0RB0216K	CC	1μF 16V	B
	C729	X-E00NU5R47M	CE	0.47μF 50V	
	C730	NCB21EK-104X	CC	0.1μF 25V	B
	C731	NCB21HK-103X	CC	0.01μF 50V	B
	C733	X-E02LU2101M	CE	100μF 16V	
	C734	NCB21HK-103X	CC	0.01μF 50V	B
	C735	QEKJ1CM-226Z	CE	22μF 16V	
	C737	X-CS0RB0216K	CC	1μF 16V	B
	C738	X-CS0RB0216K	CC	1μF 16V	B
	C739	X-CS0RB0216K	CC	1μF 16V	B
	C740	X-CS0RB04S3K	CC	0.0056μF 50V	B
	C741	X-E02LU53R3M	CE	3.3μF 50V	
	C742	X-CS0RB04S3K	CC	0.0056μF 50V	B
	C743	X-CS0RB04S3K	CC	0.0056μF 50V	B
	C744	X-CS0RB04S3K	CC	0.0056μF 50V	B
	C745	X-CS0RB0216K	CC	1μF 16V	B
	C746	X-CS0RB0216K	CC	1μF 16V	B
	C747	X-CQGTFO416Z	CC	1μF 50V	F
	C748	NCB21EK-104X	CC	0.1μF 25V	B
	C750	X-CS0RB0216K	CC	1μF 16V	B
	C751	X-CHGTB04G2J	CC	180μF 50V	B
	C793	X-CS0RCH4L1J	CC	33pF 50V	CH
	C917	QEKJ1HM-475Z	CE	4.7μF 50V	
	C918	QEKJ1HM-475Z	CE	4.7μF 50V	
	C919	QEKJ1HM-225Z	CE	2.2μF 50V	
	C920	NDC21HJ-101X	CC	100pF 50V	CH
	C921	QETN1HM-106Z	CE	10μF 50V	
	C922	NCB21HK-223X	CC	0.022μF 50V	B
	C923	NDC21HJ-101X	CC	100pF 50V	CH
	C924	QETN1AM-107Z	CE	100μF 10V	
	C925	X-E50HU5R33M	CE	0.33μF 50V	
	C926	X-CS0RB04Q4K	CC	0.047μF 50V	
	C927	NCB21HK-223X	CC	0.022μF 50V	B
	C928	NCB21EK-104X	CC	0.1μF 25V	B
	C929	X-E50HU53R3M	CE	3.3μF 50V	
	C930	NCB21EK-104X	CC	0.1μF 25V	B
	C931	NCB21EK-104X	CC	0.1μF 25V	B
	C932	NCB21EK-104X	CC	0.1μF 25V	B
	C935	X-E02LT54R7M	CE	4.7μF 50V	
	C1001	QETN1HM-106Z	CE	10μF 50V	
	C1002	QETN1HM-106Z	CE	10μF 50V	
	C1003	X-E02LT3471M	CE	470μF 25V	
	C1004	X-E02LF3102M	CE	1000μF 25V	

△ Symbol No.	Part No.	Part Name	Description	△ Symbol No.	Part No.	Part Name	Description
CAPACITORS				DIODES			
C1007	X-E02LU5220M	CE	22μF 50V	D606	MTZJ5.6B-T2	ZENER	
C1008	X-E02LU52R2M	CE	2.2μF 50V	D608	1SS133-T2	SILICON	
C1009	X-E02LF3102M	CE	1000μF 25V	D609	MTZJ5.6B-T2	ZENER	
C1010	NCB21HK-103X	CC	0.01μF 50V	D610	MTZJ5.6B-T2	ZENER	
C1011	X-E02LT3221M	CE	220μF 25V	D611	1SS133-T2	SILICON	
C1012	NCB21HK-103X	CC	0.01μF 50V	D612	1SS133-T2	SILICON	
C1501	QETNOJM-107Z	CE	100μF 6.3V	D613	1SS133-T2	SILICON	
C1502	QETNOJM-107Z	CE	100μF 6.3V	D614	1SS133-T2	SILICON	
C1503	NCB21EK-104X	CC	0.1μF 25V	D615	1SS133-T2	SILICON	
C1504	NCB21EK-104X	CC	0.1μF 25V	D618	X-D97U06R21B	ZENER	MTZJ6.2B T-77
C1505	X-CS0RB0216K	CC	1μF 16V	D711	X-D97U06R21B	ZENER	MTZJ6.2B T-77
C1506	NCB21EK-104X	CC	0.1μF 25V	D1003	MTZJ5.6B-T2	ZENER	
C1507	NCB21EK-104X	CC	0.1μF 25V				
C1508	NCB21EK-104X	CC	0.1μF 25V				
C1509	NCB21HK-103X	CC	0.01μF 50V				
C1510	QETNOJM-107Z	CE	100μF 6.3V				
C1512	NCB21EK-104X	CC	0.1μF 25V				
C1513	NCB21EK-104X	CC	0.1μF 25V				
C1514	NCB21EK-104X	CC	0.1μF 25V				
C1515	NCB21EK-104X	CC	0.1μF 25V				
C1516	QEKJ1CM-106Z	CE	10μF 16V				
C1517	NDC21HJ-101X	CC	100pF 50V				
C1518	QEKJ1HM-105Z	CE	1μF 50V				
C1519	NCB21EK-104X	CC	0.1μF 25V				
C1521	NCB21EK-104X	CC	0.1μF 25V				
C1523	X-CS0RCH4B2J	CC	120pF 50V				
C1525	QETNOJM-107Z	CE	100μF 6.3V				
C1526	NCB21HK-103X	CC	0.01μF 50V				
C1527	X-CQGTB04B3K	CC	0.0012μF 50V				
C1528	X-E02LU2101M	CE	100μF 16V				
C1530	X-E02LU53R3M	CE	3.3μF 50V				
C1531	NCB21HK-103X	CC	0.01μF 50V				
C1533	X-CS0RCH4H1J	CC	22pF 50V				
C1535	NCB21EK-104X	CC	0.1μF 25V				
DIODES				TRANSISTORS			
D001	X-D97U03301A	ZENER	MTZJ33A T-77	Q101	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D102	1SS133-T2	SILICON		Q102	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D103	1SS133-T2	SILICON		Q103	X-TNAAB05003	COMPOUND	KRC102SRTK
D107	1SS133-T2	SILICON		Q108	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D109	X-21721150	LED	SLR-342VCT32	Q109	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D201	X-D97U01201B	ZENER	MTZJ12B T-77	Q201	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D402	X-D2WT011E10	SILICON	11E1-EIC	Q202	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D403	X-D97U03001B	ZENER	MTZJ30B T-77	Q203	X-T6YJ1037K0	SILICON	2SA1037AKT146R,S
D404	X-D97U09R11B	ZENER	MTZJ9.1B T-77	Q204	X-T8AA03881S	SILICON	KTC3881S-RTK
△ D405	X-D2WTAU02A0	SILICON	AU02A-EIC	△ Q402	X-TCAT03227Y	SILICON	KTC3227_Y-AT
△ D406	X-D97U05R61B	ZENER	MTZJ5.6B T-77	△ Q405	X-TDUU024990	SILICON	2SD2499(LB0EC1)
△ D407	X-D2WTAU02A0	SILICON	AU02A-EIC	Q406	X-TPYJD05001	COMPOUND	DTA144EKAT146
D410	X-D97U03001B	ZENER	MTZJ30B T-77	Q407	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
△ D411	X-D28TELS6N6	RECTIFIER	10ELS6N-TA1B2	△ Q501	X-TCAT032034	SILICON	KTC3203_Y-AT
D414	X-D2WT011E10	SILICON	11E1-EIC	△ Q502	X-T220033260	FET	2SK3326(2)
D415	X-D2WT011E10	SILICON	11E1-EIC	△ Q503	X-TA3T1371A0	SILICON	2SA1371(D,E)-AE
△ D501	X-D2WTRM11C0	SILICON	RM11C-EIC	Q504	X-TCATC31980	SILICON	KTC3198-AT(Y,GR)
△ D502	X-D2WTRM11C0	SILICON	RM11C-EIC	△ Q505	X-TC3T029090	SILICON	2SC2909(S,T)-AA
△ D503	X-D2WTRM11C0	SILICON	RM11C-EIC	△ Q506	X-T6YJ1037K0	SILICON	2SA1037AKT146R,S
△ D504	X-D2WTRM11C0	SILICON	RM11C-EIC	△ Q507	X-TCATC31980	SILICON	KTC3198-AT(Y,GR)
△ D505	X-D28F30DF60	RECTIFIER	30DF6-FC	△ Q508	X-TAAT01273Y	SILICON	KTA1273_Y
△ D506	X-D2WXN49370	SILICON	1N4937	Q509	X-TNAAB05003	COMPOUND	KRC102SRTK
D507	1SS133-T2	SILICON		△ Q510	X-TC10013840	SILICON	2SC13840W
△ D509	X-D97U01801B	ZENER	MTZJ18B T-77	△ Q512	X-TA3T016240	SILICON	2SA1624-AA
△ D510	X-D28F30DF60	RECTIFIER	30DF6-FC	Q514	X-TCAT032034	SILICON	KTC3203_Y-AT
△ D511	X-D2WXN49370	SILICON	1N4937	Q601	X-TPAAB05001	COMPOUND	KRA102SRTK
△ D512	X-D2WXB290S0	SILICON	SB290S	Q603	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D513	MTZJ5.6B-T2	ZENER		Q604	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
△ D514	X-D2WXB290S0	SILICON	SB290S	Q701	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D515	X-D97U01201B	ZENER	MTZJ12B T-77	Q704	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D516	1SS133-T2	SILICON		Q705	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D517	1SS133-T2	SILICON		Q709	X-T6YJ1037K0	SILICON	2SA1037AKT146R,S
D519	1SS133-T2	SILICON		Q1001	X-TNAAJ05003	COMPOUND	KRC111SRTK
D520	1SS133-T2	SILICON		Q1503	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
△ D523	X-D97U01801B	ZENER	MTZJ18B T-77	Q1504	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D524	1SS133-T2	SILICON		Q1505	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D525	X-D97U08R21B	ZENER	MTZJ8.2B T-77	Q1506	X-T6YJ1037K0	SILICON	2SA1037AKT146R,S
D528	MTZJ5.6B-T2	ZENER		Q1507	X-T8YJ2412K0	SILICON	2SC2412KT146 R,S
D602	X-D97U06R21B	ZENER	MTZJ6.2B T-77				
D603	X-D97U06R21B	ZENER	MTZJ6.2B T-77				
D604	X-D97U06R21B	ZENER	MTZJ6.2B T-77				
D605	X-D2WT011E10	SILICON	11E1-EIC				
COILS				COILS			
L002	X-021673101K	COIL	100μH	L002	X-021673101K	COIL	100μH
L201	X-02167F101J	COIL	100μH	L201	X-02167F101J	COIL	100μH
L203	X-021LA61R5K	COIL	1.5μH	L203	X-021LA61R5K	COIL	1.5μH

△ Symbol No.	Part No.	Part Name	Description
COILS			
L204	X-021LA6150K	COIL	15μH
L205	X-021673470K	COIL	47μH
L301	X-021LA6470K	COIL	47μH
L302	X-021LA6220K	COIL	22μH
L401	X-021679472K	COIL	4.7μH
△ L402	X-0221000013	COIL,LINEARITY	ELH5L4112N
△ L501	X-029T000097	COIL,LINE FILTER	1R5A123F28Y
L601	X-021673470K	COIL	47μH
L602	X-021673101K	COIL	100μH
L603	X-02167F470J	COIL	47μH
L604	X-02167F470J	COIL	47μH
L701	X-02167D101K	COIL	100μH
L703	X-02167F470J	COIL	47μH
L901	X-021LA6220K	COIL	22μH
L1503	X-021673221K	COIL	220μH
L1505	X-02167F150J	COIL	15μH
L1510	X-02167F150J	COIL	15μH
L1511	X-02167F150J	COIL	15μH
L1512	X-021LA6220J	COIL	22μH

TRANSFORMERS			
△ FB401	X-043214035F	TRANSFORMER,FLYBACK	3214035F
T401	X-045009003J	TRANS,HORIZONTAL DRIVE	ETH09K14BZ
△ T501	X-0481290914	TRANSFORMER,SWITCHING	81290914

JACKS			
J701	X-060J431019	RCA JACK	MSP-213V2-432 PBSN
J702	X-063Q700002	JACK	YKF51-5503
J703	X-060J431019	RCA JACK	MSP-213V2-432 PBSN
J704	X-060J411024	RCA JACK	MSP-213V1-652 PBSN
J705	X-060G401047	RCA JACK	HTJ-032-03AY
J706	X-060G401046	RCA JACK	HTJ-032-03AW
J707	X-060G401039	RCA JACK	HTJ-032-03AR
J708	X-060J431019	RCA JACK	MSP-213V2-432 PBSN
△ J1001	X-060J131015	HEADPHONE JACK	MSJ-2000

SWITCHES			
SW101	X-0504201T31	SWITCH,TACT	SKHVBED010
SW102	X-0504201T31	SWITCH,TACT	SKHVBED010
SW103	X-0504201T31	SWITCH,TACT	SKHVBED010
SW104	X-0504201T31	SWITCH,TACT	SKHVBED010
SW105	X-0504201T31	SWITCH,TACT	SKHVBED010

CONNECTORS			
CP101	X-0694270139	CONNECTOR PCB SIDE	173979-7
△ CP401	X-069X460029	CONNECTOR PCB SIDE	B06B-DVS
△ CP502	X-069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
CP507	X-069W01001A	CONNECTOR PCB SIDE	003P-2100
CP508	X-069W01001A	CONNECTOR PCB SIDE	003P-2100
CP1001	X-069S140419	CONNECTOR PCB SIDE	A2502WV2-4P

OTHERS			
B401	X-024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B402	X-024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B501	X-024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B502	X-024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B504	X-024HT03553	CORE,BEADS	W5RH3.5X5X1.0
△ CD501	X-120R415902	CORD AC BUSH	0R415902
CD801	X-06CU2A2601	CORD CONNECTOR	CU2A2601
CD701A	X-06CH243001	CORD CONNECTOR	CH243001
CF201	X-1011T4R504	FILTER,CERAMIC	EFCT4R5YS5A
CF202	X-1022045R74	FILTER,SAW	SAFGP45M7VFGZ00B
CF203	X-1012T4R519	FILTER,CERAMIC TRAP	TPSRA4M50C00-A0
CF204	X-1012T04702	FILTER,CERAMIC TRAP	MKT47.3MC110P-TF
CP801A	X-067U010049	WIRE HOLDER	B2013H02-10P

△ Symbol No.	Part No.	Part Name	Description
OTHERS			
EL001	X-124120301A	EYE LET	XRY20X30BD
EL002	X-124116281A	EYE LET	XRY16X28BD
△ F501	X-081PC6R305	FUSE	51MS063L
FH501	X-06710T0006	HOLDER,FUSE	EYF-52BC
FH502	X-06710T0006	HOLDER,FUSE	EYF-52BC
OS101	X-0773071001	REMOTE RECEIVER	RPM7138-H5
△ RY501	X-0560V20115	RELAY	ALKS321
△ TH501	X-DF5EL3R0A0	DEGAUSS ELEMENT	ZPB45BL3R0A
△ TU001	X-0145K00056	TUNER,VHF-UHF	ENV56DB6G3
X101	X-100CT8R005	CRYSTAL	HC-49/U-S
X601	X-100CT3R505	CRYSTAL	HC-49/C

CRT PCB ASS'Y			
△ Symbol No.	Part No.	Part Name	Description
PCB110	X-A3L005J110	CRT PCB ASS'Y	TCA389A

RESISTORS					
R801	QRE141J-101Y	RC	100Ω	1/4W	
R802	QRE141J-101Y	RC	100Ω	1/4W	
R803	QRE141J-101Y	RC	100Ω	1/4W	
△ R804	X-R3X18A123J	R,METAL OXIDE	12KΩ	2W	
△ R806	X-R3X18A123J	R,METAL OXIDE	12KΩ	2W	
△ R808	X-R3X18A123J	R,METAL OXIDE	12KΩ	2W	
R809	QRE141J-101Y	RC	100Ω	1/4W	
R810	QRE141J-182Y	RC	1.8KΩ	1/4W	
R811	QRE141J-182Y	RC	1.8KΩ	1/4W	
R812	QRE141J-182Y	RC	1.8KΩ	1/4W	
R813	QRE141J-221Y	RC	220Ω	1/4W	
R814	QRE141J-221Y	RC	220Ω	1/4W	
R815	QRE141J-221Y	RC	220Ω	1/4W	
R817	QRE141J-271Y	RC	270Ω	1/4W	
R819	QRE141J-271Y	RC	270Ω	1/4W	
R821	QRE141J-271Y	RC	270Ω	1/4W	
R828	QRE141J-272Y	RC	2.7KΩ	1/4W	
R829	QRE141J-272Y	RC	2.7KΩ	1/4W	
R830	QRE141J-272Y	RC	2.7KΩ	1/4W	

CAPACITORS					
C804	X-CHGTB04K2K	CC	270pF	50V	B
C805	X-CHGTB04K2K	CC	270pF	50V	B
C806	X-CHGTB04L2K	CC	330pF	50V	B
C808	X-C0JBB0713K	CC	0.001μF	2KV	B
C809	X-E02LTD2R2M	CE	2.2μF	250V	
C813	X-P1S3T0222J	CP	0.0022μF	50V	
C815	X-CHGTB04L2K	CC	330pF	50V	B
C820	X-C0JTB0513K	CC	0.001μF	500V	B
C823	X-CHGTB04L2K	CC	330pF	50V	B

DIODES		
D801	1SS133-T2	SILICON
D802	1SS133-T2	SILICON
D803	1SS133-T2	SILICON
D807	1SS133-T2	SILICON
D808	1SS133-T2	SILICON
D809	1SS133-T2	SILICON

TRANSISTORS			
△ Q801	X-TC3Q026210	SILICON	2SC2621(D,E)-RAC
△ Q802	X-TC3Q026210	SILICON	2SC2621(D,E)-RAC
△ Q803	X-TC3Q026210	SILICON	2SC2621(D,E)-RAC
△ Q810	X-TCATC3199Y	SILICON	KTC3199_Y-AT
△ Q811	X-TCATC3199Y	SILICON	KTC3199_Y-AT
△ Q812	X-TCATC3199Y	SILICON	KTC3199_Y-AT

REMOTE CONTROL UNIT PARTS LIST (RM-C309G)

△ Symbol No.	Part No.	Part Name	Description
COILS			
L802	X-021673151K	COIL	150μH
L803	X-021673151K	COIL	150μH
L804	X-021673151K	COIL	150μH

OTHERS

CP803	X-069S320010	CONNECTOR PCB SIDE	A2361WV2-2P
CP804	X-069W010010	CONNECTOR PCB SIDE	005P-2100
CP805	X-069S2A0629	CONNECTOR PCB SIDE	A2001WV2-10P
△ J802	X-066F120018	SOCKET,CATHODE RAY TUBE	ISMS01S

MISCELLANEOUS

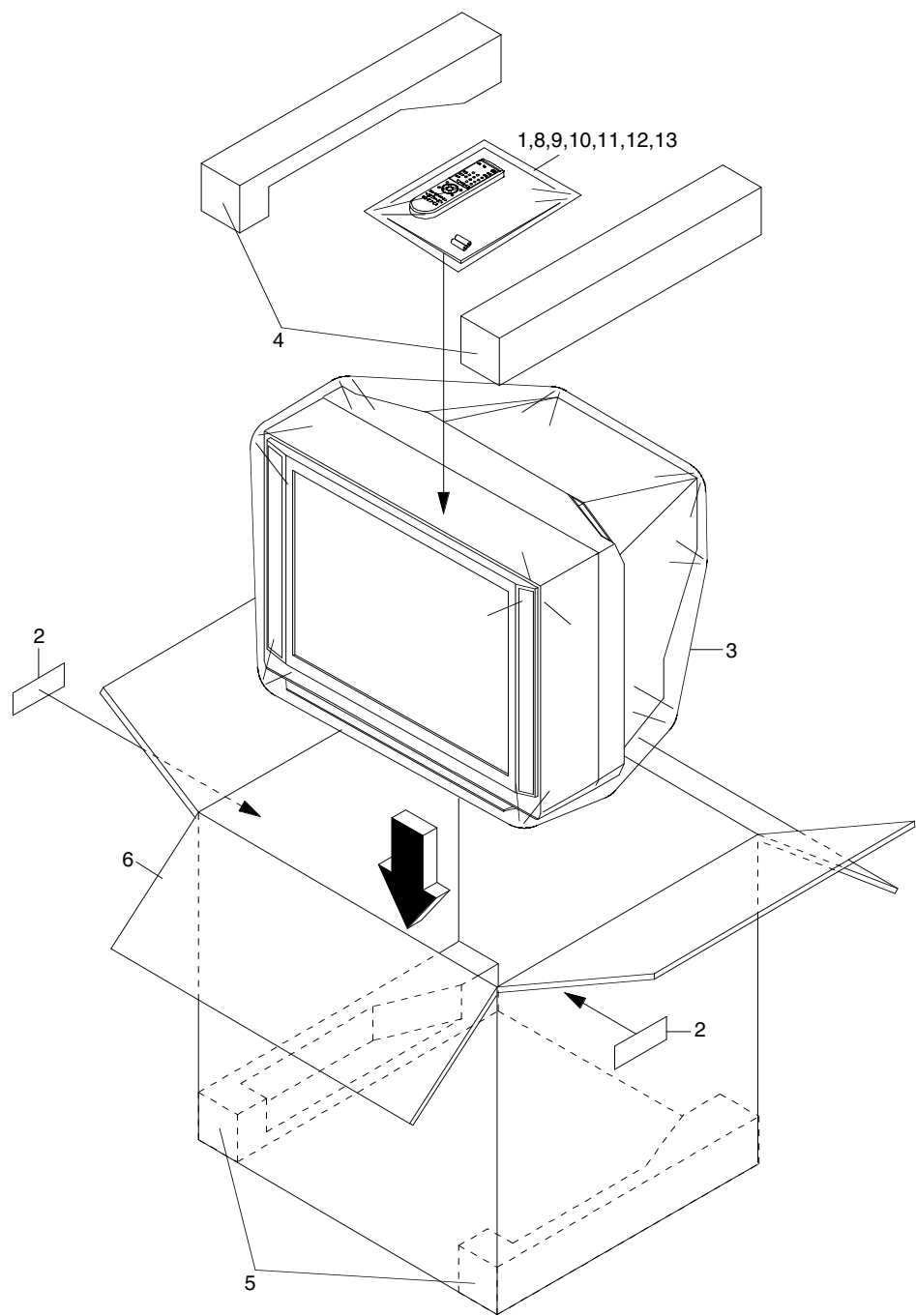
△ Symbol No.	Part No.	Part Name	Description
COILS			
△ L503	X-028R140023	COIL,DEGAUSS	8R140023

OTHERS


CD803	X-06CP82035A	CORD CONNECTOR	CP82035A
CD1001	X-06CU14411A	CORD CONNECTOR	CU14411A
△ SP1001	X-070C533008	SPEAKER	810-47-171
△ SP1002	X-070C533008	SPEAKER	810-47-171
△ V801	X-098Q150403	CRT W/DY	A36AKJ13X05

△ Ref. No.	Part No.	Part Name	Description
	UR52EC1286C	BATTERY COVER	

PACKING



ACCESSORY REPLACEMENT PARTS LIST

 Ref.No.	Part No.	Part Name	Description
1	X-076G0EC010	TRANSMITTER	EUR524339(RM-C309G)
2	X-723000B868	SHEET,UPC	
3	X-791WHA0090	LAMIFILM,BAG	
4	X-792WHA0332	PACKAGE, TOP	
5	X-792WHA0333	PACKAGE,BOTTOM	
6	X-793WCDB243	GIFT BOX	
8	X-JB5KD500	POLYBAG,INSTRUCTION(RED CAUTION)	
9	X-J3L00501	INSTRUCTION BOOK	
10	X-J5500112	GARANTEE CARD	
11	X-J5500115	SERVICE STATION LIST	
12	X-J5500117	REGISTRATION CARD	
13	X-J5501202	GARANTEE CARD	

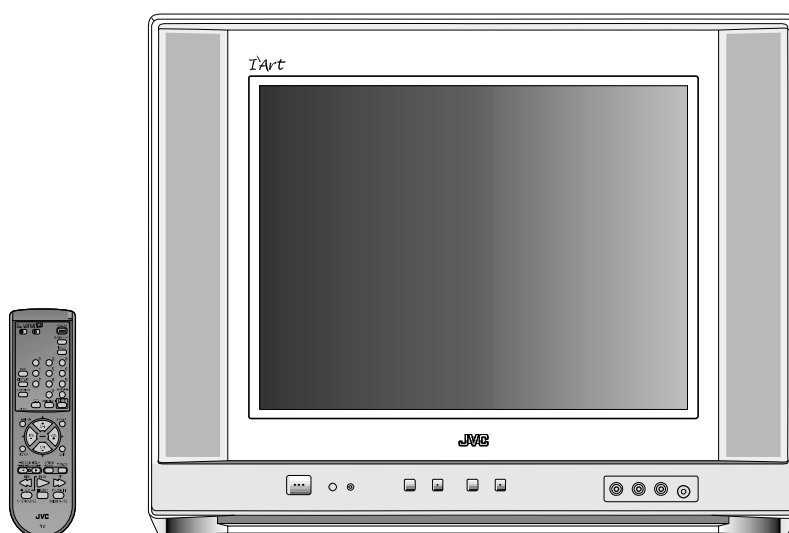
JVC

SCHEMATIC DIAGRAMS

COLOR TELEVISION

AV-14F703

CD-ROM No. SML200204



AV-14F703 STANDARD CIRCUIT DIAGRAM

■ NOTE ON USING CIRCUIT DIAGRAMS

1.SAFETY

The Components identified by the symbol \triangle are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.

2.INDICATION OF PARTS SYMBOL [EXAMPLE]

●In the PC board :R1209—R209

3.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND.

Please, care must be taken for the following points.

(1)Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2)Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected , a fuse or any parts will be broken.

◇ Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

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SEMICONDUCTOR BASE CONNECTIONS

DIODE

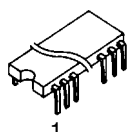


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MTZJ18B T-77
MTZJ30B T-77
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MTZJ9.1B T-77

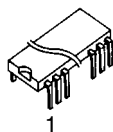
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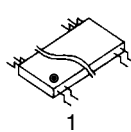
IC



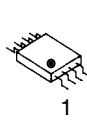
TB1253N



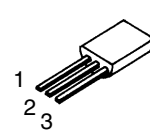
M62420SP
MM1311AD



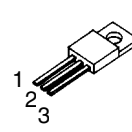
AN5829S
LA76600M-TLM
OEC7075A



NJM2150AM
S-24C16AFJA-TB-0



PST600C



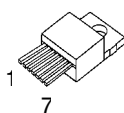
KIA7805API
KIA7809API



LTV-817M-VB

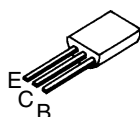


AN5276

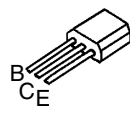


AN5522

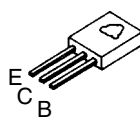
TRANSISTOR



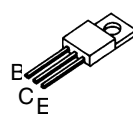
2SA1371(D,E)-AE
2SA1624-AA
2SC13840W
2SC2909(S,T)-AA



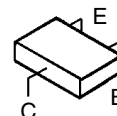
KRC102SRTK
KTA1273_Y
KTC3198-AT(Y,GR)
KTC3199_Y-AT
KTC3203_Y-AT
KTC3227_Y-AT



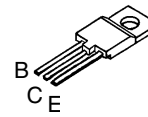
2SC2621(D,E)-RAC



2SK3326(2)

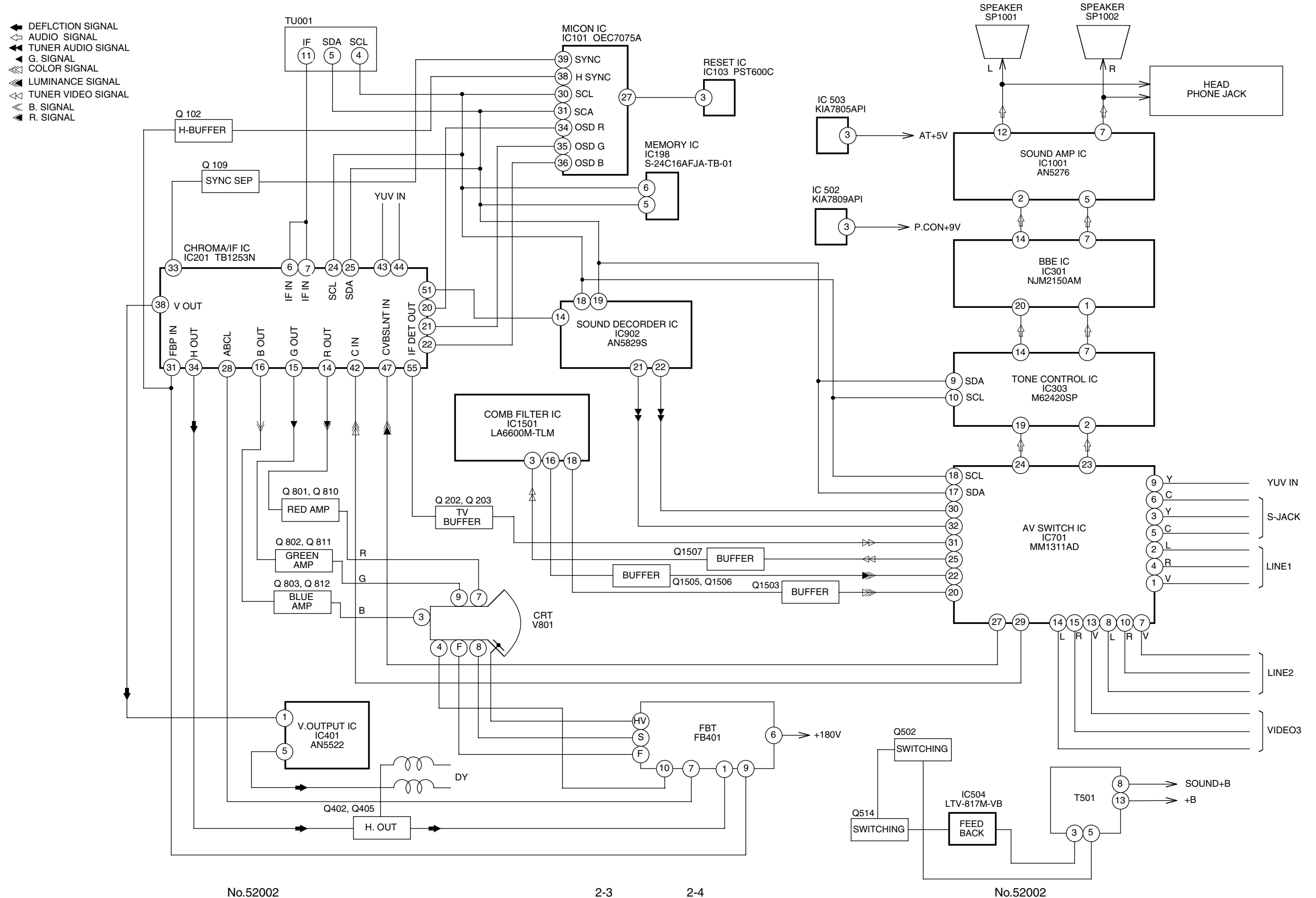


2SA1037AKT146
2SC2412KT146R,S
DTA144EKAT146
KRA102SRTK
KRC111SRTK
KTC3881S-RTK

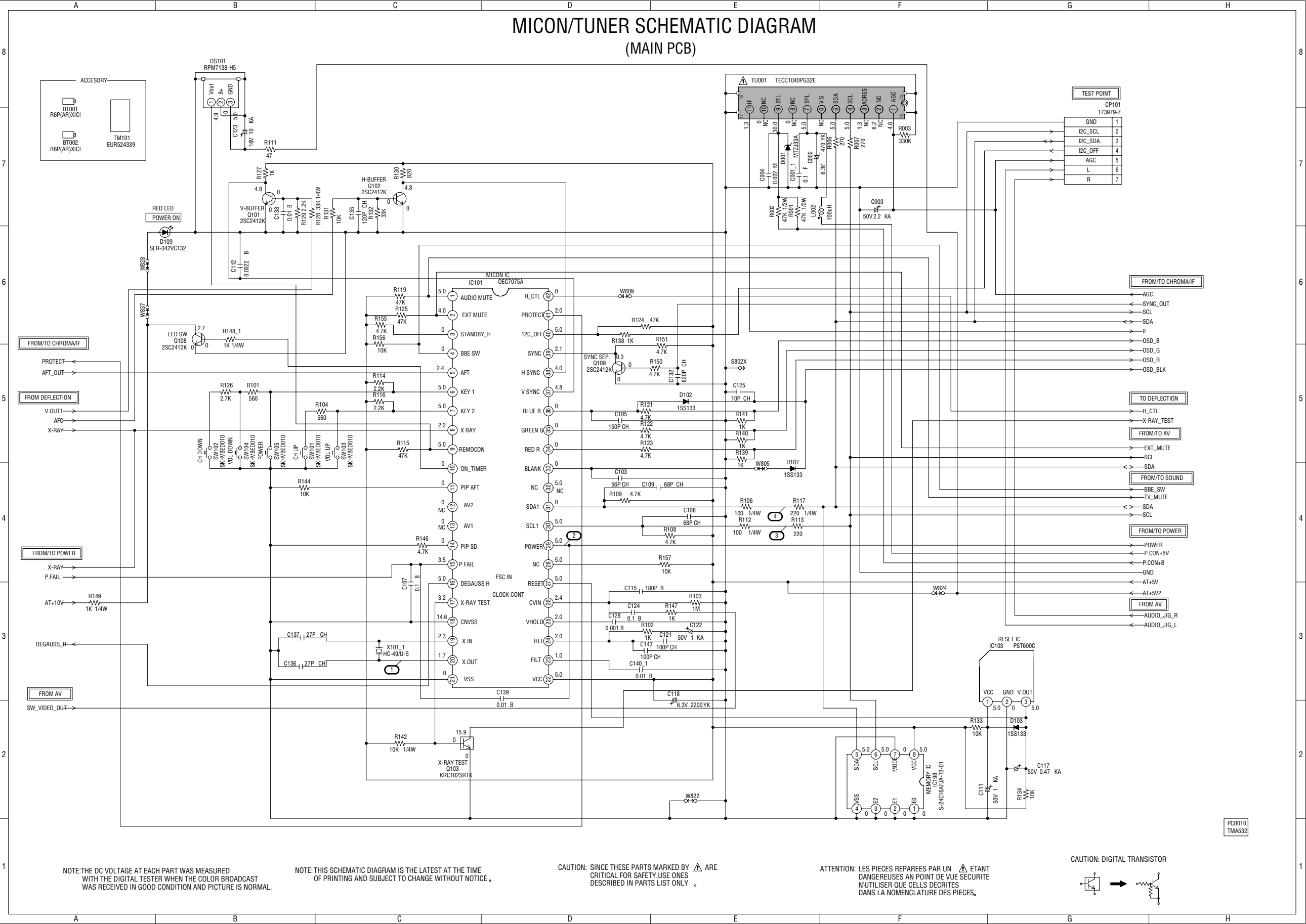


2SD2499(LBOEC1)

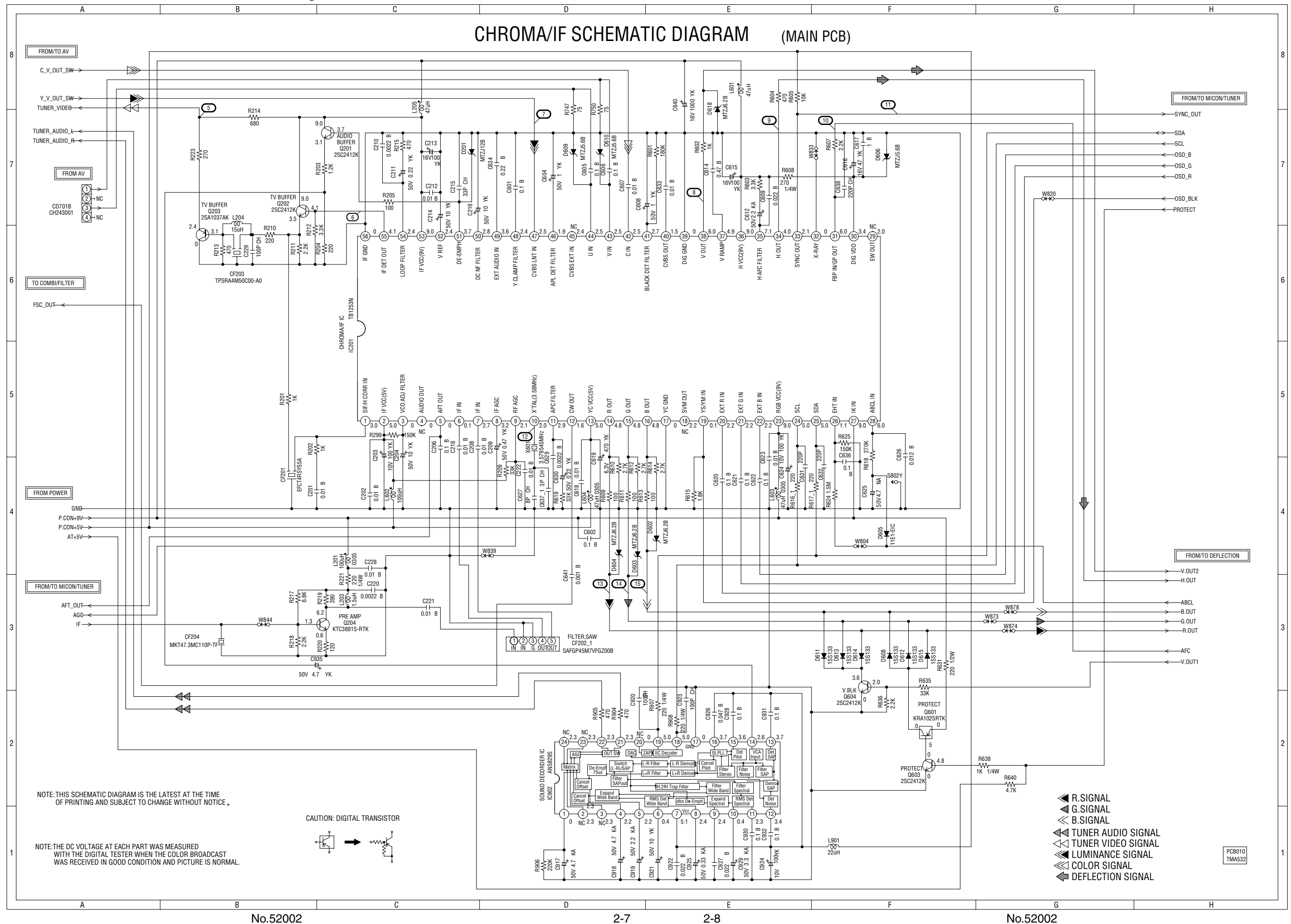
BLOCK DIAGRAM



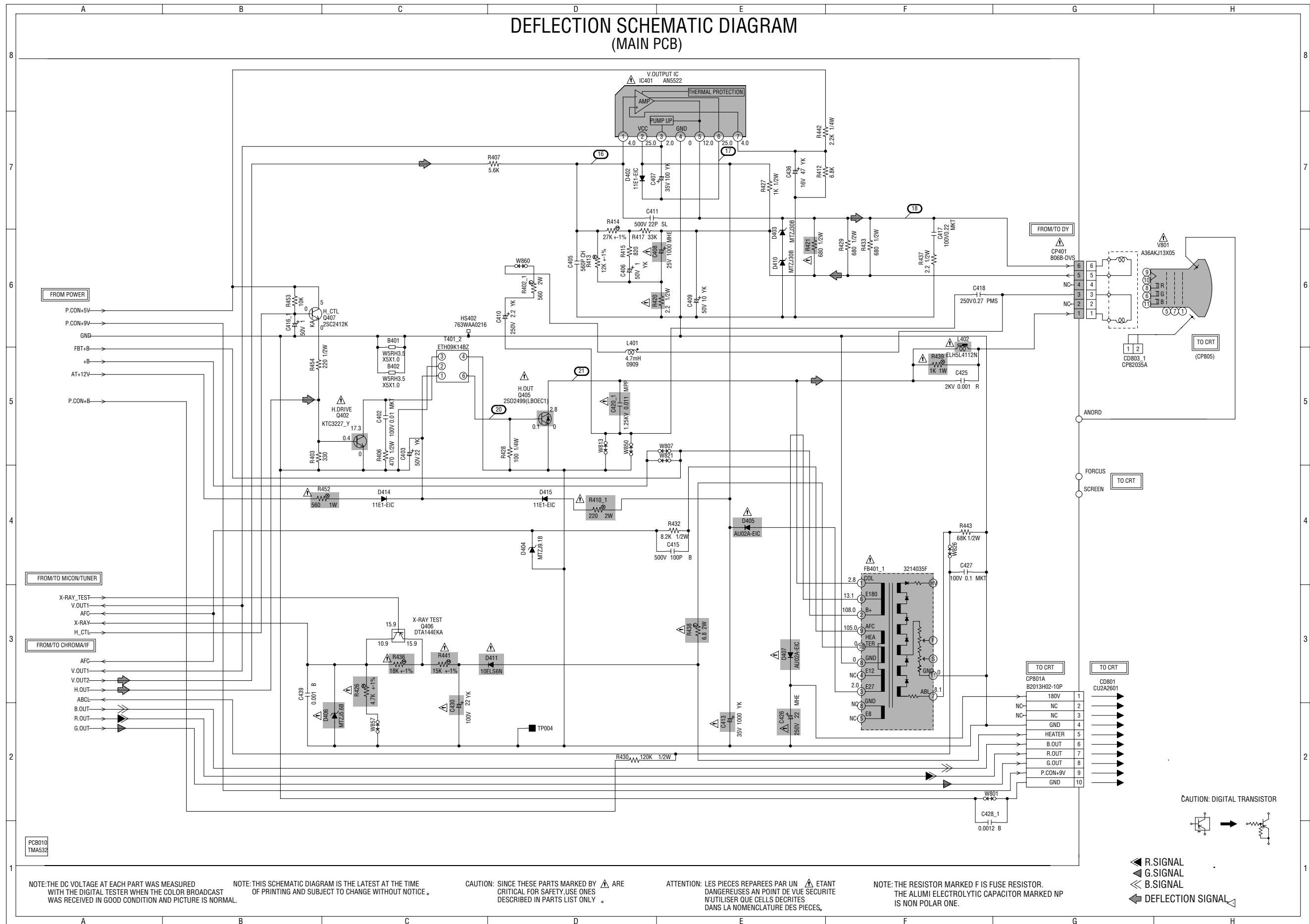
SCHEMATIC DIAGRAMS
[MAIN PCB MICON/TUNER SCHEMATIC DIAGRAM]



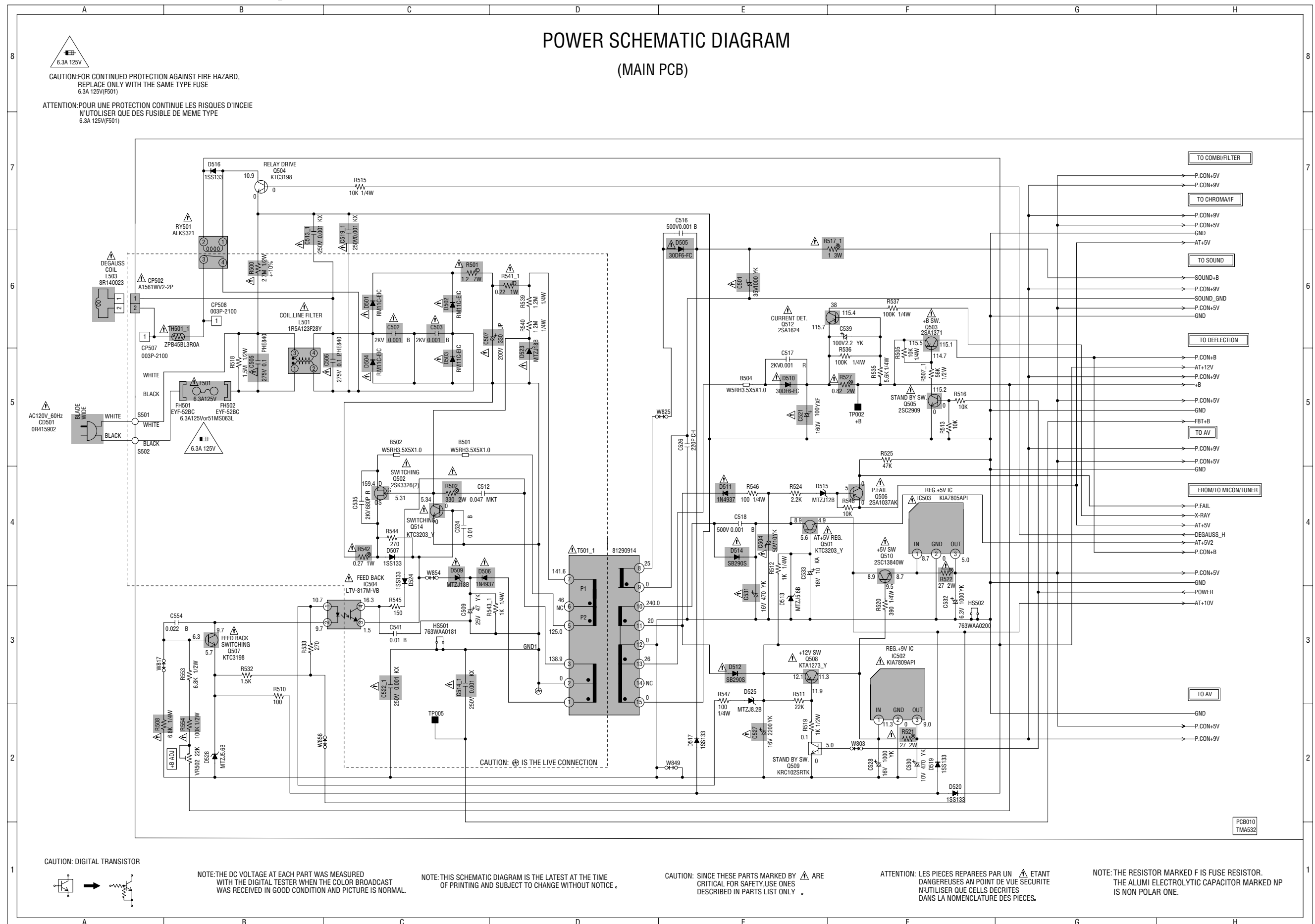
[MAIN PCB CHROMA/IF SCHEMATIC DIAGRAM]



[MAIN PCB DEFLECTION SCHEMATIC DIAGRAM]

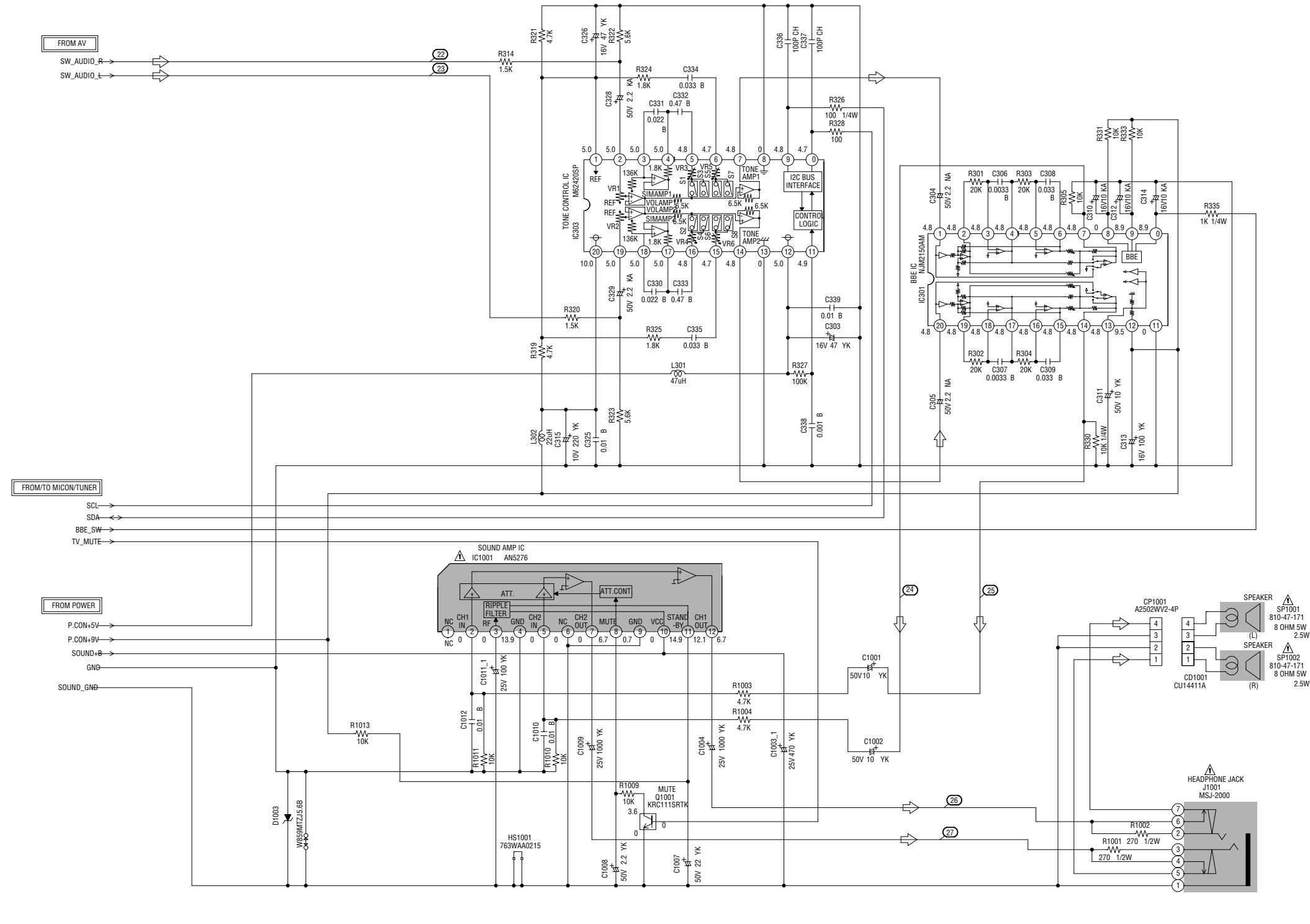


[MAIN PCB POWER SCHEMATIC DIAGRAM]




SOUND SCHEMATIC DIAGRAM

(MAIN PCB)



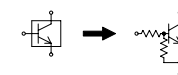
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE.

CAUTION: SINCE THESE PARTS MARKED BY  ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY .

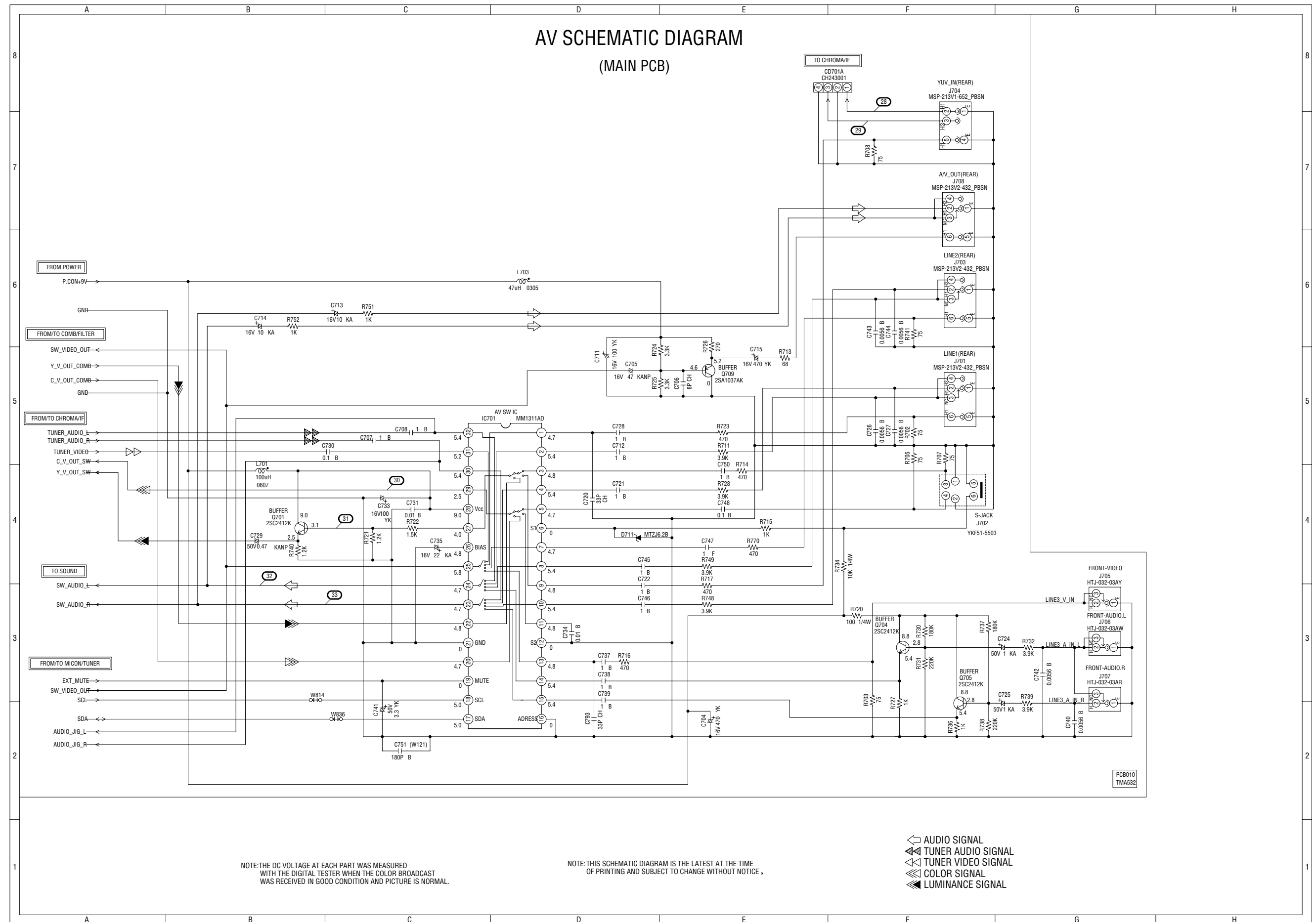
ATTENTION: LES PIÈCES RÉPARÉES PAR UN ÉTANT DANGEREUSES AU POINT DE VUE SÉCURITÉ N'UTILISER QUE CELLES DÉCRITES DANS LA NOMENCLATURE DES PIÈCES.

CAUTION: DIGITAL TRANSISTOR

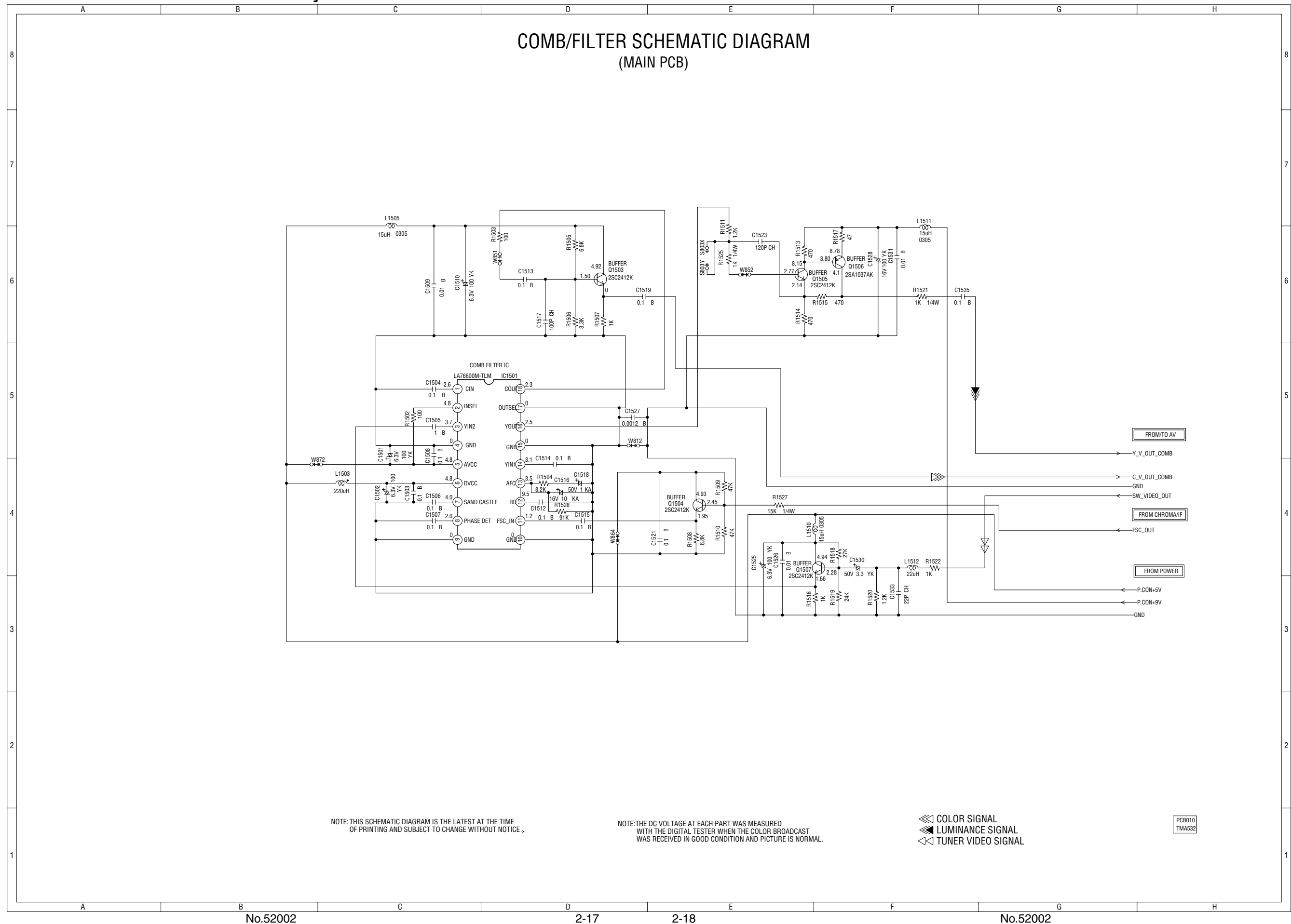


← AUDIO SIGNAL

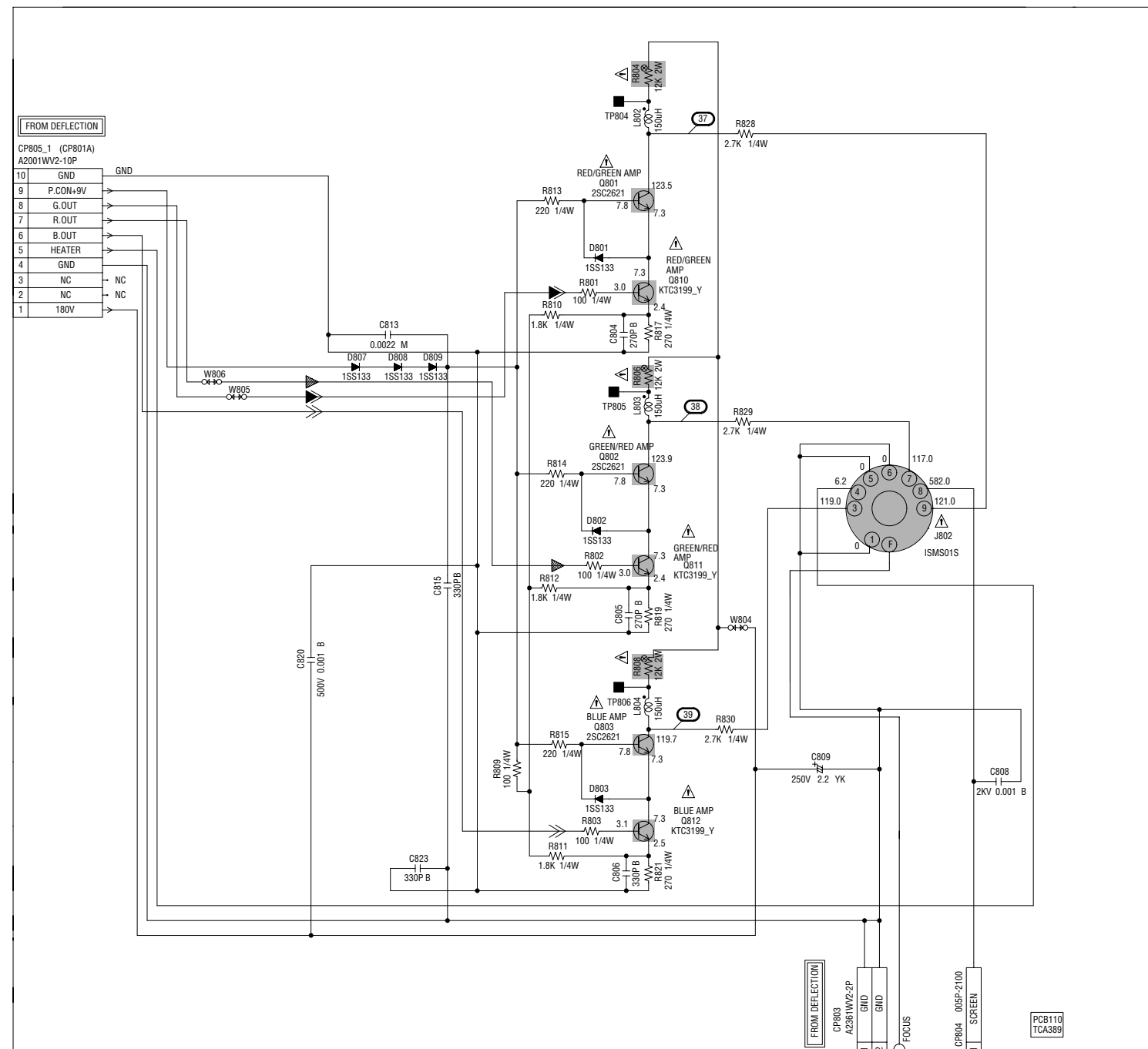
[MAIN PCB AV SCHEMATIC DIAGRAM]



[MAIN PCB COMB/FILTER SCHEMATIC DIAGRAM]



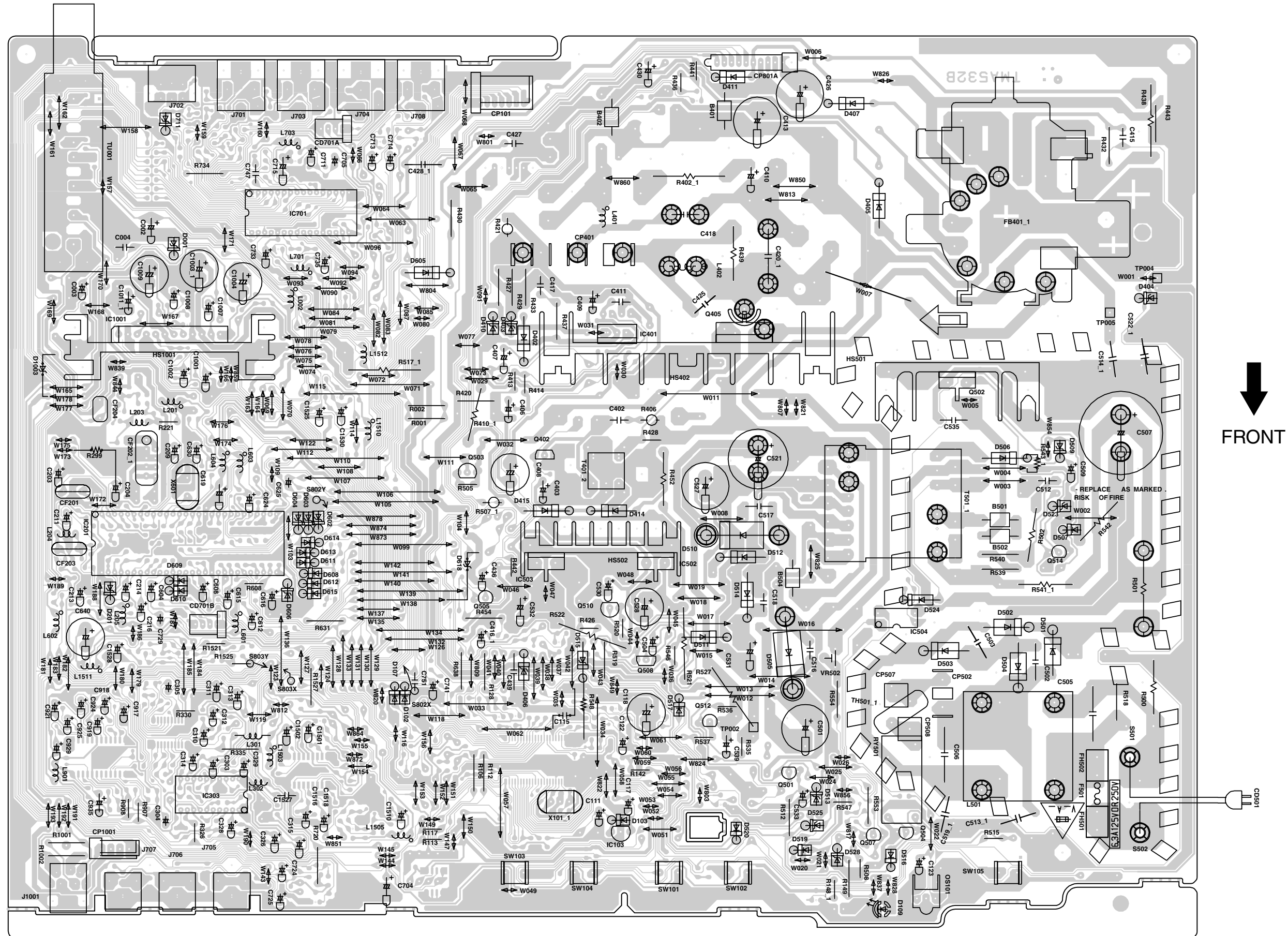
CRT SCHEMATIC DIAGRAM (CRT PCB)



◀ R.SIGNAL
◀ G.SIGNAL
◀ B.SIGNAL

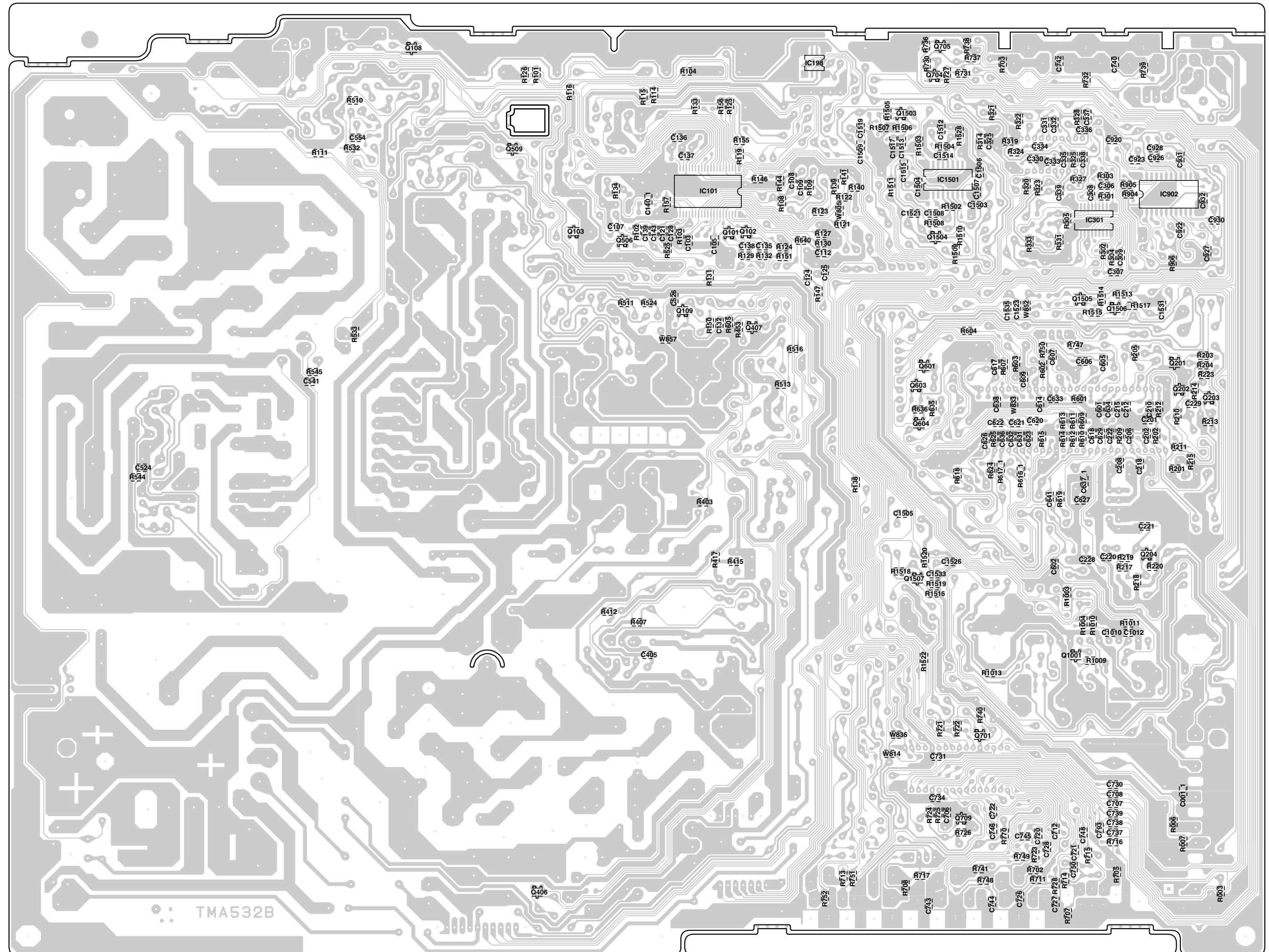
PATTERN DIAGRAMS

[MAIN PCB PATTERN (INSERTED PARTS)]



↓
FRONT

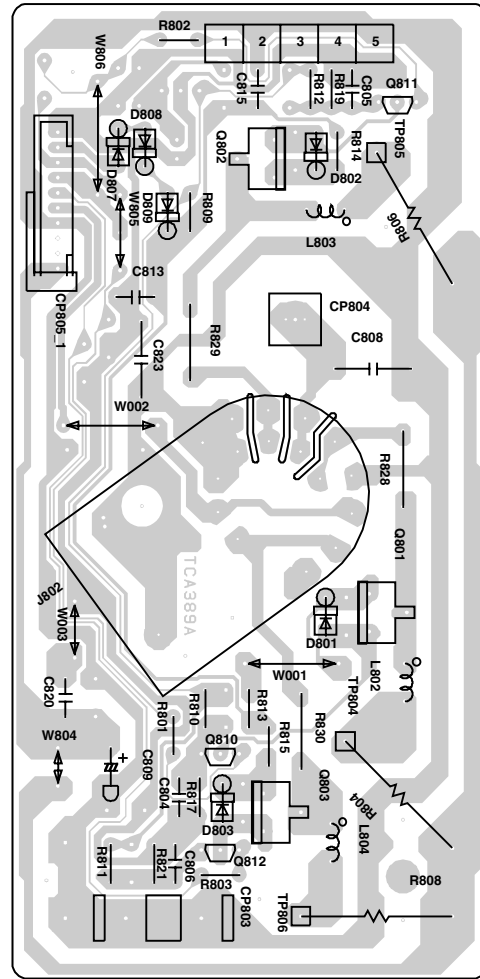
[MAIN PCB PATTERN (CHIP MOUNTED PARTS)]



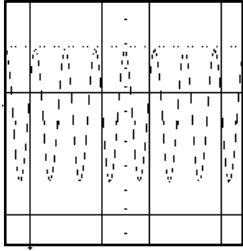
FRONT



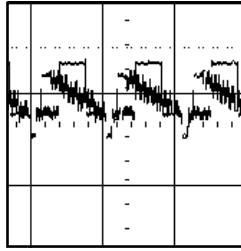
[CRT PCB PATTERN]



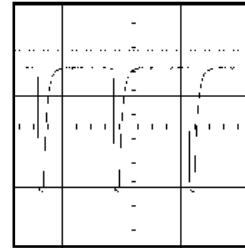
WAVEFORMS MICON/TUNER



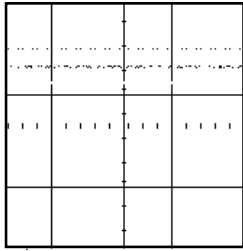
① 1V 0.1 s/div



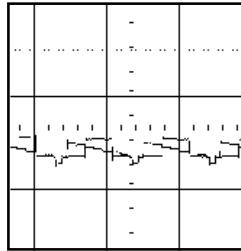
⑥ 1V 20 s/div



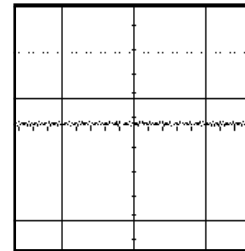
⑪ 0.5V 20 s/div



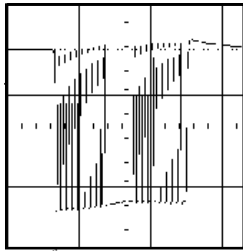
② 1V 1 s/div



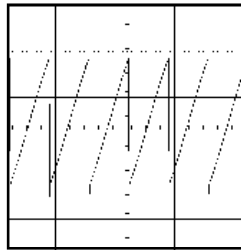
⑦ 1V 20 s/div



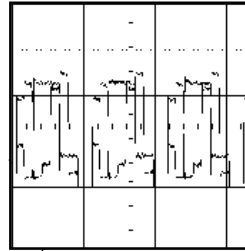
⑫ 1V 2 s/div



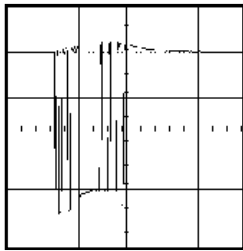
③ 1V 50 s/div



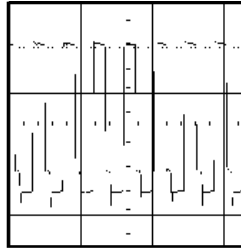
⑧ 0.5V 10ms/div



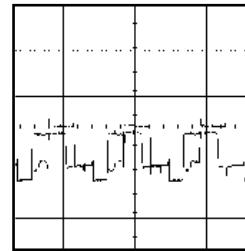
⑬ 1V 20 s/div



④ 1V 0.1ms/div

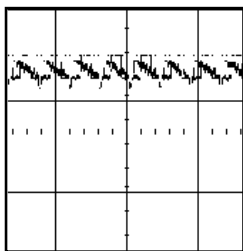


⑨ 1V 50 s/div

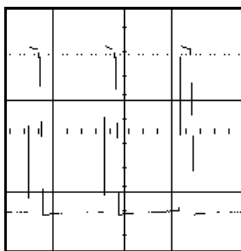


⑭ 2V 20 s/div

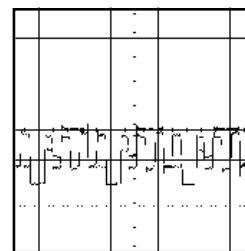
CHROMA/IF



⑤ 1V 50 s/div



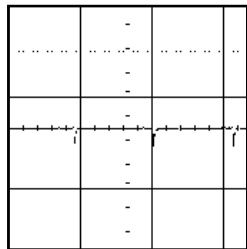
⑩ 2V 20 s/div



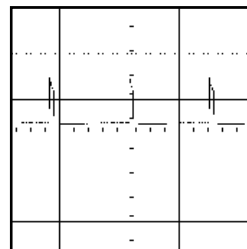
⑮ 2V 20 s/div

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

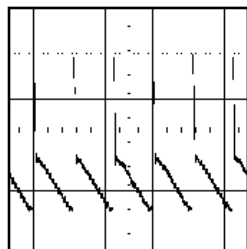
DEFLECTION



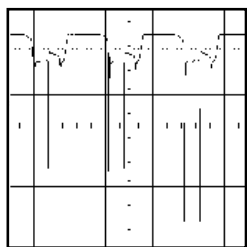
①⑥ 2V 5ms/div



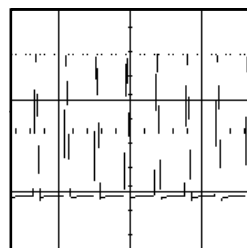
①⑦ 20V 5ms/div



①⑧ 10V 10ms/div

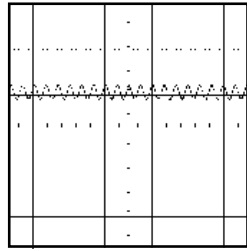


②⑩ 2V 20 s/div

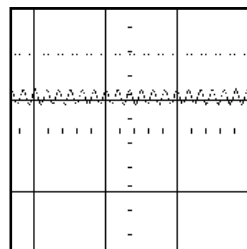


②① 200V 50 s/div

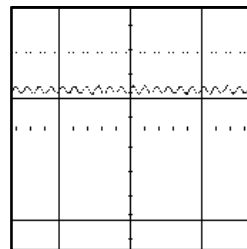
SOUND



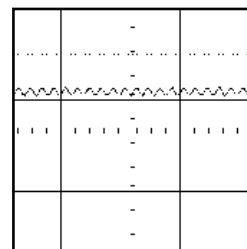
②② 2V 5ms/div



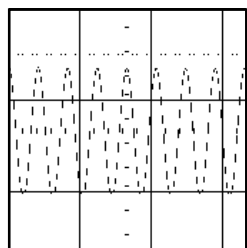
②③ 2V 5ms/div



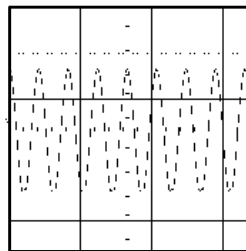
②④ 2V 5ms/div



②⑤ 2V 5ms/div

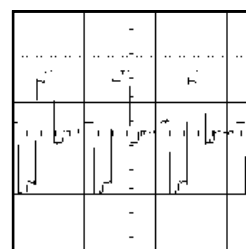


②⑥ 5V 2ms/div

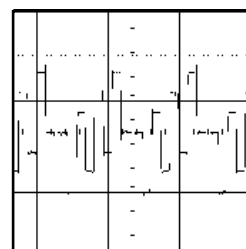


②⑦ 5V 2ms/div

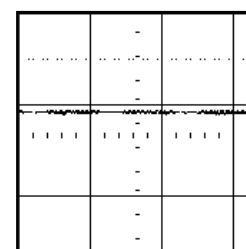
AV



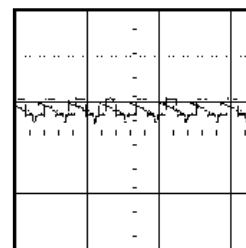
②⑧ 200mV 20 s/div



②⑨ 200mV 20 s/div

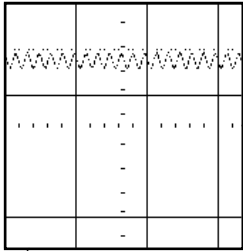


③⑩ 2V 20 s/div

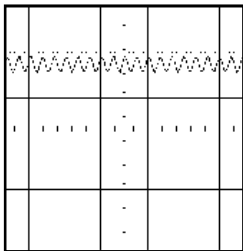


③① 1V 50 s/div

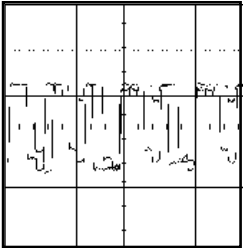
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.



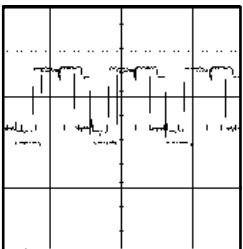
③② 2V 5ms/div



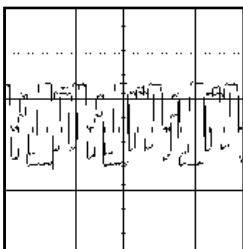
③③ 2V 5ms/div

CRT

③⑦ 50V 20 s/div



③⑧ 50V 20 s/div



③⑨ 50V 20 s/div

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.